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EQUIVALENT ROUTE WINDS FOR HELICOPTER AIR ROUTES AT HEIGHTS OF 5,000, 10,000, AND 18,000 FEET. VOLUME I

D. G. Brown, et al

Boeing Vertol Company Philadelphia, Pennsylvania

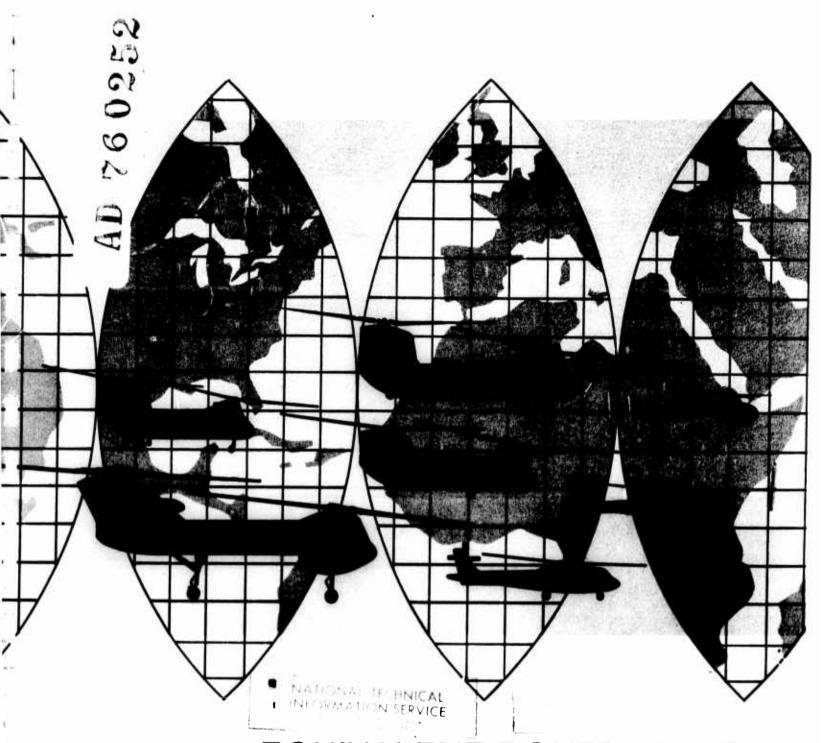
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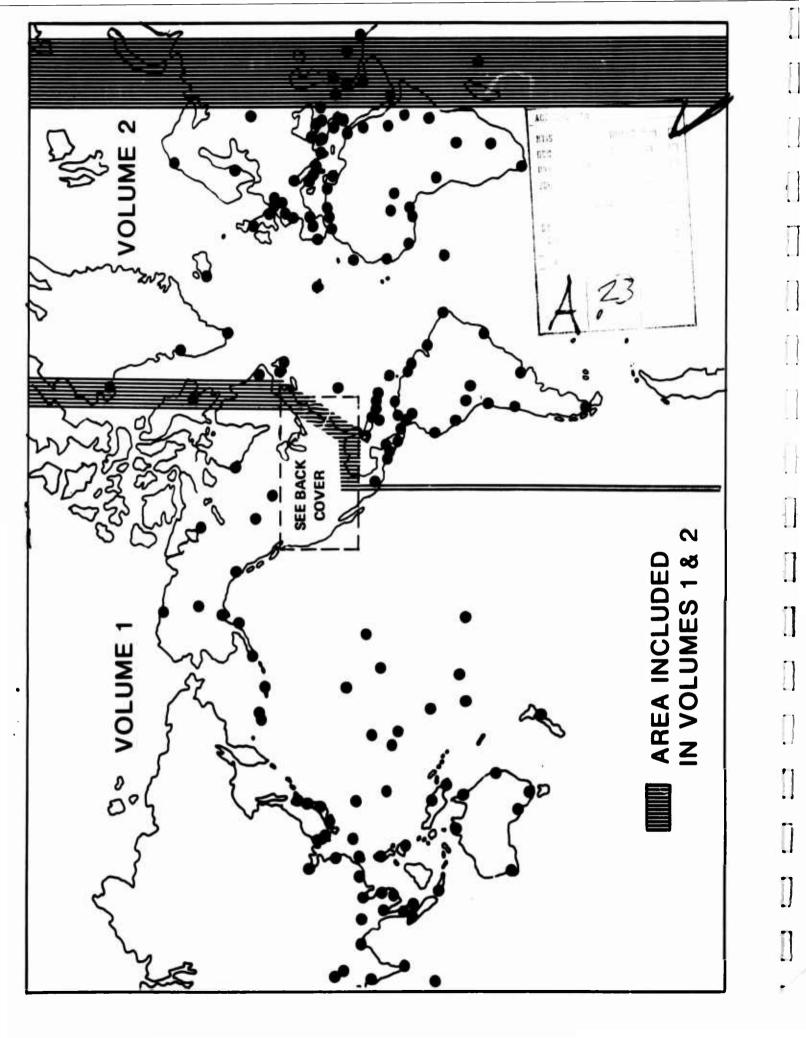


EQUIVALENT ROUTE WINDS FOR HELICOPTER AIR ROUTES

AT HEIGHTS OF 5000 FEET . 10000 FEET . 18000 FEET



VOLUME ONE



ERRATA SHEET FOR DOCUMENT D210-10600-1

Sheet III, Line 2 reads FORWARD - should read FOREWARD

Sheet VII, Title reads FORWARD - should read FOREWARD

Sheet 8. Para. 4.3, Line 1 reads 125-knot - should read 120-knot

Sheet 8. Para. 4.3, Equation (6) reads:

$$D' \approx 1/2 (D-R) + \frac{62.5}{A} (D+R)$$

Should read:

$$D' \approx 1/2 (D-R) + \frac{60.0}{A} (D+R)$$

Sheet 8. Para. 4.3, Equation (7) reads:

$$R' \approx -1/2 (D-R) + \frac{62.5}{A} (D+R)$$

Should read:

$$R' \simeq -1/2 (D-R) + \frac{60.0}{A} (D+R)$$

- Sheet 8. Para. 4.3, Line 11 reads 125 knots should read 120 knots
- Sheet 288 Line 10 reads FORT SILL elevation 119 should read 1190

EQUIVALENT ROUTE WINDS FOR HELICOPTER AIR ROUTES At Heights Of 5,000, 10,000, and 18,000 Feet

Volume I

By

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APRIL 1973

THE BOEING VERTOL COMPANY PHILADELPHIA, PA.

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FORM 46284 (2/66)

ABSTRACT

Equivalent headwinds or equivalent winds are computed using Sawyer's method for approximately 4400 strategic world air routes contained in Volumes I & II. The seasonal mean equivalent wind and its standard deviation and the annual 50-, 75-, and 85- percent reliability equivalent winds are tabulated. Route winds are computed for the 5000-, 10,000-, and 18,000 foot levels. An IBM 360/65 program was used to compute the equivalent winds. Input data for the program consist, for each level, of a grid composed of the mean vector wind and the standard vector deviation at the intersection of each 5° of latitude with each 10° of longitude between 60°S and 60°N and at the intersection of each 5° of latitude and each 20° of longitude south and north of 60°S and 60°N respectively. In addition to the equivalent winds, great circle distances are computed and tabulated for each route.

FORWARD

Ten years ago, The Boeing Company published documents on equivalent route winds for upper altitudes for domestic, international and military air routes for use in the airline industry: "Equivalent Winds for North American Air Routes," D6-9176; "Equivalent Winds for World Air Routes," D6-9177; and "Great Circle Equivalent Route Winds for Military Application," D6-9175. Since then, the helicopter industry has had a need for lower altitude wind data for helicopter routes and speeds.

Tables of winds for the lower altitudes were prepared and the computer program used for the earlier documents was modified to incorporate minor improvements in technique in order to correct inaccuracies which could occur for lower speed aircraft and to operate on the IBM 360/65 system.

Airfield bases listed in this document are only a sample of the total number available and are not chosen on major importance. It should be noted that one airfield may represent other stations within a radius of 50 miles, since the difference in the azimuths of the flight routes would be nominal, thus reflecting little if any changes in the calculated results of equivalent headwinds. Additional air routes may be requested by writing to the Boeing Vertol Company in care of the author.



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EQUIVALENT WINDS FOR HELICOPTER AIR ROUTES AT HEIGHTS OF 5,000, 10,000 and 18,000 FEET

1.0 INTRODUCTION

The increasing ability (usually with aerial refueling and/or auxiliary tanks) for helicopters to deploy over long distances has established a requirement for route wind statistics with which to make long-term estimates of the economic and strategic capabilities of these aircraft. To meet this need for route-wind data, Boeing-Vertol analysts have computed seasonal and annual equivalent winds for principal air routes.

2.0 DEFINITIONS

2.1 Equivalent Route Wind

The equivalent wind for an air route may be defined as a uniform wind, which when directed along the track at all points, results in the same average ground speed as that actually attained. Alternately, the equivalent route wind is the difference between the average airspeed and the average groundspeed throughout the flight.

2.2 Reliability Equivalent Route Wind

The reliability equivalent wind is the equivalent headwind which is not exceeded (a route wind which can be relied upon) a given percent of occasions or time during a given period.

3.0 COMPUTATIONS

3.1 Equations

3.1.1. Equivalent Route Wind

Sawyer's theory of equivalent headwinds has been applied extensively to the computation of equivalent route winds 1-9. This method involves use of the mean vector wind and the standard vector deviation, two parameters which completely define the circular normal distribution of winds generally found in the free atmosphere. Charts and tabulations of the mean vector wind and the standard vector deviation are available in many meteorological publications 10-19.

The principal assumptions of Sawyer's theory are (1) the wind speed does not exceed the speed of the aircraft and (2) the distribution of winds in the free atmosphere during a given season can be approximated by the circular normal distribution. Based on these and other assumptions, the basic equation for the average equivalent headwind, EW, over a route and expressed in terms of the mean vector wind and the standard vector deviation, σ , at points along the



3.1.1. Equivalent Route Wind (cont'd.)

route is:

$$EW = \underbrace{\begin{array}{c} \sum_{i=1}^{N} z_i \\ i=1 \end{array}}_{N} - A$$

$$\underbrace{\begin{array}{c} \sum_{i=1}^{t} t_i \\ i=1 \end{array}}$$

z i = length of i-th segment of route

 t_i = time to fly zi

A = airspeed of aircraft over route

but
$$t_i = z_{i/g_i}$$

where \bar{g}_i = mean ground speed on i-th segment = $A - \frac{1}{2A}$ (\bar{v} $\frac{2}{i}$ + $\frac{\sigma_1^2}{2}$) + \bar{u}_i

v_i = mean vector wind component
normal to track

- = mean vector wind component parallel
ui to track

and $z_i = Z/N$

Z = great circle route distance
N = number of equal length segments z;

$$EW = \frac{2}{\frac{N}{\sum_{i=1}^{N} \frac{Z/N}{\bar{g}_i}}} - A$$

$$EW = \frac{2}{\sum_{i=1}^{N} \frac{1/-}{g_i}} - P$$

3.1.1. Equivalent Route Wind (cont'd.)

or, equivalent headwind is the harmonic mean* of the ground speeds less airspeed. By convention, when mean ground speed is less than airspeed, equivalent wind is a headwind and will be negative.

*The earlier Boeing documents used the arithmetic mean for headwind. Since the airspeed in their case was much greater than windspeed, error would be small. The harmonic mean is technically correct, and for lower airspeed, required to eliminate overestimates.

3.1.2. Route Standard Deviation

Correlation studies and physical considerations reveal that vector winds at points along a route are related to one another 1,21. For this reason, the mean vector wind and the standard vector deviation at points along a route while sufficient to determine the average value of the route equivalent wind, are insufficient to determine its variability. For example, strong winds at points along a route may or may not occur simultaneously. If they do not occur together, there is a tendency for the headwind components to average out such that the average value of the extreme winds is less than the values of the extreme winds at individual points over the route. Sawyer has shown this to be the case.

The route standard deviation provides a measure of the variability of the equivalent route wind. The relationship between the route standard deviation and the average value of the standard vector deviation at points along the route is:

$$\sigma_{t} = s \sqrt{\frac{\sum_{i=1}^{N} \sigma_{i}}{\sum_{i=1}^{N} \sigma_{i}}}$$

where:

 σ_{+} = Route standard deviation (tabulated value)

S = Factor to convert root mean square standard vector deviation of wind over a route, into the route standard deviation of the equivalent route wind. The value of S decreases with increasing route length and exhibits some variation with season, latitude and route orientation.

The values of s used in preparing Table 3 are those listed in Graystone⁶.

3.1.3. Great Circle Distance

Route lengths in nautical miles are computed over the great-circle

3.1.3. Great Circle Distance (cont'd.)

course, i.e., the least distance on a sphere, between terminals. The expression used to compute great circle distances is:

 $\mathbf{g} = 60 \cos^{-1}(\sin \psi_1 \sin \psi_2 + \cos \psi_1 \cos \psi_2 \cos (\lambda_1 - \lambda_2))$

where:

= Great circle distance
in nautical miles

ψ = Latitude

 λ = Longitude

cos-1 = Angle expressed in degrees

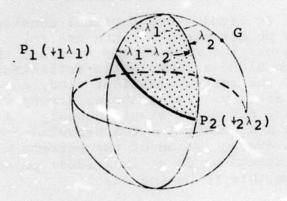


Fig. 1
Great Circle Distance

South latitudes and east longitudes are considered negative and north latitudes and west longitudes are considered positive.

3.2 Annual Equivalent Route Winds

Annual equivalent route winds for the 50%, 75%, and 85% level are computed from the seasonal mean values of equivalent route winds and their standard deviations. The technique involves an iterative procedure by which wind speeds are found such that 50, 75, and 85 percent of the total area under the four seasonal wind distribution curves, lies to their right. With reference to Figure 2, the 50, 75, and 85 annual equivalent winds are estimated to be -5, -11, and -13 knots respectively. (From the

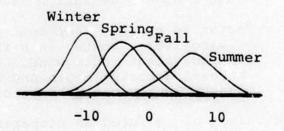


Fig. 2. Hypothetical Seasonal Wind Distribution



3.2 Annual Equivalent Route Winds (cont'd.)

definition, these are the headwinds - headwinds are negative - which will not be exceeded X% of the time. If the distribution of winds are entirely positive (tailwinds) the technique is the same. To assure a headwind value which will not be exceeded, one must get the lowest value of tailwind which meets the reliability level.

3.3 Input Data

The most recent and internally consistent summaries of statistical wind data available were used. Wind statistics were obtained primarily from Crutcher and the NAVAIR publications while the airfield coordinates were obtained from standard reference sources. The mean vector wind and the standard vector deviation together with the coordinates of each terminal form the input data for an IBM 360/65 program. The wind parameters for the four seasons and for the 5000 (850 mb), 10,000 (700 mb), and 18,000 (500 mb) foot levels, were obtained by computing them at the intersection of each 5° of latitude with each 10° of longitude between 60°N and 60°S and at the intersection of each 5° of latitude with each 20° of longitude north of 60°N and south of 60°S.

3.4 Method

Equivalent route winds are computed by first dividing the route into an integral number of segments of 200 miles or less in length and then calculating the segment flight time resulting from the wind vectors at the mid-points of these segments. This is accomplished by weighing the four nearest wind values (at grid points) in proportion to their proximity to the point on the route. The times are summed for the entire route, and resulting average ground speed is calculated. Equivalent wind results by subtracting average airspeed from the average ground speed.

By convention, a positive sign denotes a tailwind; a negative sign, a headwind.

3.5 Tabulations

Equivalent winds for the 5,000-, 10,000-, 18,000- foot levels are tabulated for routes between selected airfields (Table 3). The route wind tabulations are organized alphabetically by the terminals that identify each route. In the index, each route is referenced under both of its terminals (Table 4). Included in the data are:



3.5 Tabulations (cont'a.)

- The direct and return seasonal mean equivalent route wind and its standard deviation and the annual 50-, 75-, and 85- percent reliability equivalent route wind in knots.
- 2. The great circle distance in nautical miles.

An alphabetical listing of terminals with their geographical coordinates is provided in Table 3.

4.0 USE OF TABLES

4.1 Normal Curve

Brooks¹⁰ et al found that in any one season the distribution of equivalent route winds about the mean closely approximates the normal law of errors. According to this law, the mean and its standard deviation completely define the distribution of winds about the mean. In turn, this error distribution very nearly approximates the normal or Gaussian frequency distribution defined as:

$$Y = \frac{1}{\sigma \sqrt{2\pi}} e^{-x^2/2}$$

where:

Y = The frequency ordinate at distance x from the mean

The standard deviation

4.2 Estimating Reliability Equivalent Route Winds

Computation of reliability equivalent route winds deserves special attention since deviations of the relative frequency of extreme wind speeds from the assumed normal law of errors may be appreciable, particularly at levels and in regions affected by jet streams. The frequency of extreme values is probably higher than that predicted from the assumed model. For this reason, reliability equivalent winds for percentages less than 5 and greater than 95 are likely unreliable.

Two methods for estimating equivalent winds for reliabilities other than for the tabulated mean values involve use of error factors and secondly, use of arithmetic probability paper.

4.2.1. Error Factor Method

For a given route, reliability equivalent winds are computed by subtracting the product of k times the standard deviation from the

4.2.1. Error Factor Method (cont'd.)

mean equivalent wind, where k is a factor derivable from the error function. Values of k are given in Table 1 or can be found from tables of the normal curve of error. These methods are accurate only for estimating seasonal reliabilities. The seasonal curves approximate the normal law of errors, but the annual curve does not. Therefore, to get an annual reliability requires an iterative technique as described in 3.2.

The error factors method is illustrated by computing the 85 percent reliability equivalent route wind over the great circle - Ft. Rucker to Ft. Eustis air route, in winter at 5,000 feet.

TABLE 1. ERROR FACTORS

| Reliability Percent | +k |
|---------------------------------|--|
| (Area under normal curve to +k) | (Number of standard devi- ations from the mean) |
| 50 | 0.0 |
| 60 | 0.25 |
| 70 | 0.52 |
| 80 | 0.84 |
| 85 | 1.04 |
| 90 | 1.28 |
| 95 | 1.65 |

From Table 1, the error factor is 1.04.

a. The DIRECT reliability equivalent headwind which should not be exceeded on 85 percent of occasions is a wind of -23 knots:

or, Mean - 1.04
$$\sigma_{t}$$
 (See 3.2) =-23 knots.

b. The RETURN reliability equivalent headwind which can be relied on 85 percent of occasions is a wind of -2.5 knots;

10 -
$$(1.04 \times 12) = -2.5 \text{ knots.}$$

or, Mean - $1.04 \, \sigma_+$ (See 3.2)

4.2.2. Arithmetic Probability Paper Method

As previously stated, in any season the distribution of equivalent route winds about the mean closely approximates the normal law of errors and the normal or Gaussian frequency distribution defined in (4). Arithmetic probability paper is arranged with the percent cumulative frequency scale printed on the ordinate such that the integral of the normal



4.2.2. Arithmetic Probability Paper Method (cont'd.)

$$Q(x) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{x_e} \frac{x_e^{-x}}{-x} dx$$
 (5)

frequency curve plots as a straight line while the absicissa has a linear scale. The sign convention is followed for equivalent wind speeds (+ for a tailwind and - for a headwind). These two lines give the frequency distribution of equivalent winds over the route.

4.3 Variation in Airspeed

The tabulated equivalent wind data were computed for a 125-knot airspeed. For airspeeds much above this value, the new values may be approximated by assuming the wind speed is the result of the arithmetic mean of the ground speeds.

Expressions to use are:

$$D' \approx 1/2 (D - R) + \frac{62.5}{A} (D + R)$$
 (6)

$$R' \approx -1/2 (D - R) + \frac{62.5}{A} (D + R)$$
 (7)

If D and R are of equal value and of opposite sign, the tabulated values are the same for any airspeed. If D \downarrow R, i.e., a cross wind component is present, D and R will differ slightly from D and R.

Caution should be exercised when attempting to use airspeeds less than 125 knots, because simplifications used in the basic Sawyer method will cause increasing error as wind speeds at any segment approach aircraft speed.

Percent reliability equivalent headwinds computed for the new airspeed, A , will differ by the same amount as the mean values, i.e., D - D', because standard deviations are not sufficiently affected by changes in airspeed 2.

4.4 Great Circle Route Length

The route length in nautical miles is computed over the great-circle course, i.e., the least distance on a sphere, between terminals (Fig. 3). For completeness, a great circle may be defined as the intersection of the surface of a sphere and a plane which passes through the center of the sphere. A nautical mile is the length

4.4 Great Circle Route Length (cont'd.)

on one minute of arc along a great circle on the earth's surface, i.e., the earth's circumference is $360 \times 60 = 21,600$ n. mi. In terms of statute miles, 1 n. mi. = 1.1508 miles.

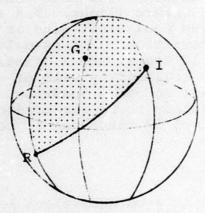


Figure 3 Great Circle Route Length

4.5 Equivalent Route Length

The equivalent route length, for a given reliability equivalent wind, is the distance that an aircraft would have flown in still air on a flight having the same duration as that required with given percent equivalent wind. The equivalent route length may be expressed as

$$L_{X} = \frac{DA}{A + W_{Y}} \tag{11}$$

where:

 L_x = Equivalent route length in knots for x percent reliability equivalent wind W_y

D = Great circle distance in nautical miles

A = Airspeed in knots

5.0 OCCURRENCE OF HEADWINDS ON BOTH DIRECT AND RETURN FLIGHTS

Over routes characterized by prevailing light winds or by strong winds perpendicular to track the direct and return route winds can both appear as a headwind. This situation occurs when the contribution to the mean equivalent wind from the wind components at right angles to the track exceeds the contribution from the wind components along the track. The effect of winds at right angles to track on the ground speed becomes apparent when it is realized that an



5.0 OCCURRENCE OF HEADWINDS ON BOTH DIRECT AND RETURN FLIGHTS (cont'd.)

airplane could make no progress along the intended track with a wind at right angles to the track and equal to its airspeed.

Reliability equivalent headwinds for some routes appear as headwinds for the direct and return flight. The situation can occur over routes where the mean equivalent wind is about the same magnitude as its standard deviation. For example, a route having a mean equivalent wind of 12 knots, and a standard deviation of 15 knots, has an 85 percent reliability wind of -3 knots. In this example a tailwind has not become a headwind, but rather a headwind of 3 knots is not likely to be exceeded on 85 percent of occasions and a tailwind of 12 knots can be relied on 50 percent of occasions.

6.0 RELIABILITY OF RESULTS

The reliability of the tabulated equivalent headwinds as being representative of the actual route winds over great circle routes depends largely upon the assumption that wind distributions in the free atmosphere can be treated by the circular normal distribution. This distribution requires that the zonal and meridianal components of wind be uncorrelated and that their standard deviation be equal. From physical considerations, however, some degree of ellipticity must be present, otherwise there would be no mean transport of energy in the atmosphere as is observed. For most conditions, the degree of ellipticity is small and the assumed circular normal distribution acceptable. Brooks10 pointed out that the assumption of circularity is likely to be weakest in frontal zones, in the vicinity of jet streams and in areas characterized by distinct seasonal wind variation such as the boundary region between a monsoon circulation and the circulation above.

The tabulated values are intended as long term estimates of enroute winds and as such the actual winds in any one season may differ appreciably from them. This condition particularly occurs where all routes closely parallel the mean position of the jet stream. Where air routes routinely traverse normal to the jet stream, however, only small differences between the tabulated and observed route winds should occur.

7.0 CONCLUSION

The application of equivalent winds can aid agencies concerned with the problems of aircraft logistics to estimate the long term capabilities of helicopters to deploy over long distances. Considerable effort has been expended by Boeing-Vertol since 1965 to display temperature probability variations with altitude. Many government agencies are using our data on that subject. By combining that data with the wind data of this document, one can estimate fairly accurately the effects on helicopter performance.

REFERENCES

- Sawyer, J. S., "Equivalent headwinds: Application of upperwind statistics to air-route planning," Met. Rep., London, 2, No. 6, M.O. 535a, Her Majesty's Stationery Office, 1950, 20 p.
- 2. "Equivalent headwinds on some of the principal air routes of the world," Met. Rep., London, 2, No. 2, M.O. 535b, Her Majesty's Stationery Office, 1950, 19 p.
- 3. Phillpot, H. R. and Reid, D. G., "Equivalent headwinds on Australian air routes," Bulletin No. 41, Commonwealth of Australia, May 1952, 24 p.
- Cohen, S., "Sector equivalent headwinds on QANTAS world air routes," Rep. No. 1600, Issue A, QANTAS Empire Airways, 1956, 142 p.
- 5. Crossley, A. F., "Temperature-compensated equivalent headwinds for jet aircraft," Met. Rep., London, 8, No. 17, M.O. 621a, Her Majesty's Stationery Office, 1957.
- 6. Graystone, P., "Equivalent headwinds at heights of 30,000 feet and 40,000 feet along air routes," Met. Rep., London, 8, No. 20, M.O. 621d, Her Majesty's Stationery Office, 1958.
- 7. Evenson, A. A., Mancuso, R. L. and Wells, R. M., "Winds for United States air routes: Equivalent headwinds at heights of 20,000, 30,000 and 40,000 feet," D6-5186, The Boeing Company, 1960, 260 p.
- 8. , "Winds over World air routes: Equivalent headwinds at heights of 20,000, 30,000 and 40,000 feet with supplementary airport temperatures," D6-5187, The Boeing Company, 1960, 194 p.
- 9. "Great circle route equivalent headwinds for military applications with supplementary airport temperatures," D6-5185, The Boeing Company, 1960, 176 p.
- 10. Brooks, C. E. P., Durst, C. S., Carruthers, N., Dewar, D. and Sawyer, J. S., "Upper winds over the world," Geophys. Mem., London, 10, No. 85, Her Majesty's Stationery Office, 1950, 150 p.
- 11. Henry, T. J. G., "Map of upper winds over Canada," Meteorological Branch, Department of Transport, 1957, 61 p.
- 12. Lahey, J. F., Bryson, R. H., Wahl, E. W., Horn, L. H. and Henderson, V. D., "Atlas of 500 mb wind characteristics for the Northern Hemisphere," University of Wisconsin Press, Madison, 1958.



- 13. U. S. Weather Bureau, "Upper wind distribution statistical parameter estimates," <u>Tech. Paper</u> No. 34, U. S. Department of Commerce, November 1958.
- 14. Ratner, B., "Upper-air climatology of the United States: Part 3 Vector winds and shear," <u>Tech. Paper No. 32</u>, U. S. Weather Bureau, 1959, 67 p.
- 15. Crutcher, H. L., "Upper wind statistics charts of the Northern Hemisphere (850, 700 and 500 mb levels)," NAVAER 50-1C-535, Vols. I and II, Office of the Chief of Naval Operations, August 1959.
- 16. Lahey, J. F., Bryson, R. A. Corzine, H. A. and Hutchins, C. W., "Atlas of 300 mb wind characteristics for the Northern Hemisphere," University of Wisconsin Press, Madison, 1960.
- 17. Tucker, G. B., "Upper winds over the world: Part III, Standard vector deviation of wind up to the 100- millibar level over the world," Geophys. Mem., London, 13, No. 105, M.O. 631e, Her Majesty's Stationery Office, 1960, 101 p.
- 18. Heastle, H. and Stephenson, P. M., "Upper winds over the world," Parts I and II, Geophys. Mem., London, 13, No. 103, M.O. 631c, Her Majesty's Stationery Office, 1960, 217 p.
- 19. Crutcher, H. L., "Meridional cross-sections: Upper winds over the Northern Hemisphere," <u>Tech. Paper No. 41</u>, U. S. Weather Bureau, June 1961, 307 p.
- 20. Brooks, C. E. P. and Carruthers, N., Handbook of Statistical Methods In Meteorology, London, M.O. 538, Her Majesty's Stationery Office, 1953.
- 21. Durst, C. S., "Variation of wind with time and distance," Geophys. Mem., London, 12, No. 93, 1954, 32 p.
- 22. Sadler, "Mean-Cloudiness and Gradient-Level Wind Charts Over The Tropics," Volume I, August 1970.
- , "Atlas of Wind Characteristics Over The Southern Hemisphere," Vol. I, 1967, Vol. II, 1970.

TABLE 3

EQUIVALENT ROUTE WINDS FOR HELICOPTER AIR ROUTES

AT HEIGHTS OF 5,000, 10,000, AND 18,000 FOOT LEVELS

INVARIOR INC. AND SELECT LINE

| DEVIATION | 1 00.1 | . H. | • | • | N. MI. | 11: | 2 | F. R. | • | • | N.MI. | • • | 21 | N. HI. | · | • | N. MI. | . ~ | | #. # . | · · | • | | • | 11 | | | • |
|-----------|------------------|----------------|--------|------------|---------------|-------|------|-----------------|--------|-----------|----------|----------|-------|---------|----------|---------|--------|----------|-------|--------|----------|----------------|---------|-----|-------------|-----------|------------|--------|
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*HEADMINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES ANNUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES. MIRUS SIGN DENOTES HEADMINDS.

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SQUIVALENT HEADWINDS AND STANDAPD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR ROUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

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EQUIVALENT MEADWINDS AND STANDAFD DEVIATION IN CHOTS FOR GREAT CIRCLE AIR ROUTES

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| TO ELTORO MCAS 5 | | | | 7 | · 7 | 4 | - | -12 | | | ٠ د | | | - | 20 / | <u>.</u> | • | • |
| TO ELTORO MCAS 5 2 2 2 3 -2 -3 -5 -5 -1 -10 -11 10 9 324 NeW 12 3 7 8 -3 -5 -1 -17 -5 -10 -13 -27 -31 23 20 13 TO ENGLAND AFB 13 0 0 -2 -4 -10 -11 10 9 7 14 2 2 2 -3 -5 -5 -17 -9 -16 -18 10 9 7 TO FORT CAMPBELL 10 0 FORT CAPSON TO FORT CAPSON 10 0 FORT CAPSON 10 0 -2 -4 -10 -11 10 9 7 10 0 FORT CAPSON 10 0 -2 -7 -8 6 7 59 10 10 9 7 10 0 FORT CAPSON 10 0 -2 -7 -8 6 7 5 10 10 9 7 10 0 FORT CAPSON 10 0 -2 -7 -8 6 7 5 10 10 9 7 10 0 FORT CAPSON 10 0 -2 -7 -8 6 7 5 -9 10 10 9 7 10 0 FORT CAPSON 10 0 -2 -7 -8 6 7 5 -9 10 10 9 7 10 0 FORT CAPSON 10 0 -4 -5 -1 -2 -4 -9 10 9 7 10 0 FORT CAPSON 10 0 -5 -6 -10 -11 10 10 9 7 10 0 FORT CAPSON 10 0 -2 -7 -8 10 11 10 9 7 10 0 FORT CAPSON 10 0 -5 -6 -10 -10 11 10 9 7 10 0 FORT CAPSON 10 0 -2 -7 -8 10 -15 -17 10 10 9 7 10 0 -5 -6 -10 -18 10 10 9 7 10 0 FORT CAPSON 10 0 -2 -7 -8 10 -15 -16 -18 10 10 10 10 10 10 10 10 10 10 10 10 10 | | | | 0.1 | -10 | -12 | ~ | -25 | 11 | N | v ~ | | 2 10 | 0 4 | - 9 | | 0 4 | • = |
| 5 2 2 2 3 4 4 4 4 5 -5 -5 -6 -10 -11 10 9 7 7 -6 -16 -18 15 14 9 7 1 1 15 14 9 7 1 15 14 9 1 15 16 9 1 15 16 9 7 15 16 7 9 -16 -18 16 9 7 9 -16 -18 16 9 7 9 -16 -18 7 9 -16 -18 7 9 -16 -18 7 9 -16 -18 7 9 -16 -18 7 9 -16 -18 7 -16 -18 7 9 -16 -18 7 -16 -18 7 9 -16 -18 7 -18 9 -18 9 -18 <td></td> <td></td> <td>10</td> <td></td> <td>-</td> <td></td> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td>:</td> | | | 10 | | - | | 4 | | | | | | | | | | • | : |
| TO FORT CAMPBELL TO FORT CAMPS NAT CAPE NAT CAP | | | . ~ | 7 | ٠ ٧ | | 2 | - | ŕ | ľ | • | , | 1 | | | | | 24 N |
| TO ENGLAND AFB TO FINCLAND AFB TO FORT BEINNING TO FORT CANDELL TO FOR | | | 6 | 0 | * | 5 | | 5 | -1 | -10 | , 0 | 1 10 | 1 | 911 | | | | - 10 |
| TO FINGLAND AFB 1 | | | 7 | ٣ | ~ | 60 | | 9 | -23 | -17 | | - | | -27 | 1 | 23 | 20 | 1 |
| 3 0 0 1 -3 -4 -3 -3 0 0 -2 -7 -8 6 7 5 10 10 9 7 5 10 11 3 7 15 16 17 5 16 17 -20 -32 -35 16 14 8 1 10 9 7 5 16 17 -20 -32 -35 16 14 8 1 10 9 7 5 16 17 -20 -32 -35 16 14 8 1 10 9 7 5 16 17 -20 -32 -35 16 14 8 1 10 9 7 7 10 17 19 10 8 -36 -28 -11 -20 -23 -35 -38 15 13 8 1 10 10 9 7 5 16 17 -20 -32 -35 -36 15 13 8 1 10 10 9 7 6 10 10 10 10 10 10 10 10 10 10 10 10 10 | | | 10 | | | ş | | | | | | | | | | | . ' | |
| TO FORT CAMPSELL TO FORT CAMP | | • | ~ | 0 | ì | 0 | î | 1 | -3 | - | 0 | c | | | | - | ~ | Z, |
| TO FORT CAMPELL TO FOR | | | _ | m | _ | • | ~ | 0 | - 16 | - | 7 | - | 1 | • | - | | - 6 | n • |
| TO FORT BENNING TO FORT CAPSON TO FORT CAPSO | | | 6 | 7 | 15 | 91 | ~ | ĸ | -33 | ~ | | - | - 20 | • 10 | m | | - = | - 0 |
| 12 2 2 3 -1 -2 -6 -5 -2 -4 -9 -10 8 7 5 24 10 17 19 10 8 -2 -2 -4 -9 -10 8 7 5 24 10 17 19 10 8 -2 -2 -4 -9 -10 9 | | | 7.5 | | FOFT | BENNIN | ی | | | | | | | | | | | |
| 12 5 8 9 4 2 -18 -13 -5 -9 -11 -18 -20 9 9 5 15 10 17 10 10 10 10 10 10 10 10 10 10 10 10 10 | | | 4 | ~ | ~ | 6 | 7 | -2 | 9 | - 5 | ? | | 4- | | | | Ĩ, | ż |
| 24 10 17 19 10 8 -36 -28 -11 -20 -23 -35 -36 15 13 6 1 1 10 10 10 10 10 10 10 10 10 10 10 10 | | | 7 | 2 | 60 | • | * | ~ | -18 | -13 | 1 | | _ | - | 2 2 | 0 0 | • 6 | ^ |
| TO FORT CAPSON | | • | 0 7 | 11 | 61 | 2 | 60 | -36 | -28 | == | ~ | 1 N | • 1 | -36 | 15 | 13 | |
| 2 0 -2 0 -4 -5 -1 -2 0 3 0 -5 -6 8 7 850 N-NII 19 5 11 13 2 0 -2 -12 -10 -2 -5 -7 -15 -17 12 10 7 1 4 3 2 3 -1 -2 -6 -5 -3 -7 -14 -17 -30 -34 19 17 10 1 4 3 2 3 -1 -2 -6 -5 -3 -9 -11 8 8 5 11 10 10 9 7 70 FORT CAPSON 71 FORT CAPSON 72 FORT CAPSON 73 FORT CAPSON 74 FORT CAPSON 75 FORT CAPSON 76 FORT CAPSON 77 FORT CAPSON 78 FORT CAPSON 79 FORT CAPSON 70 FORT CAPSON 70 FORT CAPSON 70 FORT CAPSON 71 FORT CAPSON 71 FORT CAPSON 72 FORT CAPSON 73 FORT CAPSON 74 FORT CAPSON 75 FORT CAPSON 76 FORT CAPSON 77 FORT CAPSON 78 FORT CAPSON 79 FORT CAPSON 70 FORT CAPSON 71 FORT CAPSON 71 FORT CAPSON 72 FORT CAPSON 73 FORT CAPSON 74 FORT CAPSON 75 FORT CAPSON 76 FORT CAPSON 77 FORT CAPSON 78 FORT CAPSON 79 FORT CAPSON 70 FORT CAPSON 70 FORT CAPSON 70 FORT CAPSON 70 FORT CAPSON 71 FORT CAPSON 71 FORT CAPSON 72 FORT CAPSON 73 FORT CAPSON 74 FORT CAPSON 75 FORT CAPSON 76 FORT CAPSON 77 FORT CAPSON 77 FORT CAPSON 78 FORT CAPSON 79 FORT CAPSON 70 FORT CAPSON 71 FORT CAPSON 72 FORT CAPSON 73 FORT CAPSON 74 FORT CAPSON 75 FORT CAPSON 76 FORT CAPSON 77 FORT CAPSON 7 | | | 10 | | FORT | = | | | | | | | | | | | | |
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| TO FORT CAMPBELL 4 3 2 3 -1 -2 -6 -5 -3 -3 -5 -9 -11 8 8 5 5 10 12 7 10 11 4 3 -18 -12 -7 -10 -12 -19 -20 10 9 7 7 10 11 4 9 10 -12 -19 -20 10 9 7 7 10 11 4 9 10 -10 -12 -19 -20 10 9 7 7 7 0 10 10 10 10 10 10 10 10 10 10 10 10 1 | | | • | Ŋ | = | 13 | 7 | 0 | | -23 | -1 | | _ | -30 | ă, | | | 01 |
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| 2 0 -1 0 -4 -5 -1 -2 0 1 0 -5 -6 7 7 5 9 6 8 8 1 0 -13 -9 -6 -8 -9 -16 -18 12 11 8 20 15 16 18 7 4 -29 -23 -15 -19 21 31 8 | | | 10 | | FORT | CAPSON | | | | | | | | | | • | | |
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| 20 15 16 18 7 4 -29 -23 -15 -19 -19 -19 -19 -19 | | | • | 9 | 80 | 60 | - | 0 | -13 | 9 | í | | | • | | - ; | | ٠, |
| | | | | | 16 | 18 | 1 | • | - 20 | - 23 | - | | • | • | | 71 | | • |

*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. *INUS SIGN DENOTES HEADWINDS.

FULL VALENT HEADMINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT

| AL AMEDA NA 5000 10000 16000 | | | | | | | | | | | | | | | 1 | | DEVIA | DEVIATION |
|---------------------------------------|----------|------|-----------|--------|-----------|------------|------|-----|-------------|----------|---------------|--|------|------------|-------------|------|---------------|-----------|
| | JAN | A Pp | <u> </u> | ב שני | ** A50 | A75 | A85 | NAL | APR | JUL | RETURN OCT | ** A 50 | A75 | A 85 | 746 | APA | Ę | 100 |
| 0 0 0 | NAS | 10 | | FOPT | G00H | | | | | | | | | | | | | ; |
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| | 27 | 22 | • • | * | 15 | o v | o m | -31 | -11 | 7 8 | 9 | 9- 67- | -15 | -17 | 10 | • 5 | ~ 0 | 6 4 |
| ALAMEDA NAS | S | 10 | | FORT | HUACHUC | • | | | | | | | | | | | | |
| £ C00 | - | 7 | 0 | 7 | • | † | -5 | 7 | -2 | 0 | - | 7 | 4 | -7 | 3 | • | Ž , | Ë |
| 18000 | 77 | 17 | + | 40 | 11 | 70 | £ 5 | -12 | -10 | 75 | -1-5 | | -15 | -17 | 13 | `=: | • | 2: |
| | | • | | | 15 | | | ; | | ١ | | 2 | 4 | 76 - | 07 | 2 | - | 2 |
| 5000 NAS | • | ٤, | • | FORT | KNOX | • | , | • | | | | | | | | 4 | N 669 | |
| 10001 | - | `= | n « | ^ = | ٦ - | 2 4 | ۶- | 9 | | r · | | \$ | - | -1 | ໝ | • | • | |
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| AL AMEDA 14A | S | 10 | | FORT | LEAVEN | NEOPTH | | | | | | | | 3 | | , | ١ | |
| 2000 | ۳. | m | 7 | 7 | ~ | -5 | -3 | • | † | -2 | -2 | - | • | 0 | • | • | 1272 N. | i i |
| 00001 | * | 0 | ~ | σ, | 6 | ~ | - | -16 | 01- | -1 | 01- | - 11 | -18 | -19 |) = | 2 | • | • • |
| 00081 | 1.7 | 71 | 9 | 18 | 61 | 2 | 7 | -35 | -54 | 91- | -21 | -23 | -34 | -37 | 12 | 9 | 10 | . 5 |
| AL AMEDA NAS | | 10 | | F 00 T | LENIS | | | | | | | | | | | | | |
| 2000 | 2 | 7 | -5 | 7 | 0 | ş | 9 | ï | -2 | m | -2 | 7 | - 7 | • | - | • | | - |
| 18000 | 77 | -50 | | - ŗ | 0 N | P 2 | -11 | •• | 77 | 77 | | ?? | -10 | | 25 | . 45 | • | 77 |
| AL AMEDA NAS | S | 10 | | FOPT | RUCKFP | | | | | | | , | 1 | | } | | | 9 |
| 2000 | * | + | - | _ | 2 | ~ | - | 5 | 1 | - | ī | | _ | 9 | | Ξ, | 840 K | II. |
| 10000 | 16 | 12 | 4 | 60 | • | ı m | · ~ | -11 | -13 | • • | | ֓֞֜֜֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֓֡֓֓֓֓֡֓֓ | 9 - | 7 0 | 30 (| - 1 | . | 9 (|
| 18000 | 30 | 54 | • | 91 | 18 | 6 | 7 | -35 | -28 | -10 | 61- | -22 | -34 | -37 | 14, | 13 | • • | P 21 |
| SEN ECHAIN | S | TO | | FORT | SILL | | | | | | | | | | | • | | |
| 2000 | 2 : | ~: | 0 | 01 | 0 | 1 | -5 | 2- | 7- | c | 0 | 7- | 9 | -1 | 10 | • | . T. J. C. T. | · A |
| 1 9 0 0 0 | 28 | 22 | - 1 | 16 | 8 1 | ~~ | 0 w | -15 | -11 | 5 | 81- | -21 | -17 | -19 | 1 8 | 019 | · ~ 0 | 0 2 |
| AL AMEDA NAS | ~ | 10 | | FORT | MOLTERS | | | | | | | | | | | |) | 1 |
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| 0000 | 7 | = | ~ | ~ | 9 | - | 0 | -15 | 11- | E | - | • | - 1 | - 10 | 2 | - 0 | n P | - 6 |
| c | 28 | 22 | 0 | 15 | 11 | ~ | 2 | -32 | -25 | 01- | -11 | - 20 | -32 | -35 | 11 | 15 | - 0 | * = |
| AL AMEDA NAS | S | 10 | | GEN | MI TCHELL | | | | | | | | | | | | | |
| 5000 | S | \$ | m | * | • | C | - | 9- | -5 | - | 5 | 1 | 2 | | ٥ | - | 280 % | - |
| • | 9 ! | C | 01 | 11 | 11 | s | 3 | -11 | C1 - | 2- | -12 | - 13 | - 16 | -20 | 9 2 | 0 0 | o r | - 6 |
| 00591 | 2.2 | 70 | 10 | 20 | 12 | 71 | 01 | -33 | -23 | 61- | -23 | *2- | -34 | -37 | 2 4 | 15 | • | 1 |

***A--CENUTES ANNUAL FOUTVALENT HEADWINDS FOR INDICATED PER CENT PELIABILITIES. MINUS SIGN DENTES 4EADWINDS.

EQUIVALENT HEADAINDS AND STANDAPD DEVIATION IN KINTS FOR GPEAT CIRCLE AIR POUTES

| HE IGHT | | | | | | 7 0 0 | 4 | E N T | HEA | 3 | IND | - 1 | | | | STAN | DARD | STANDARD DEVIATION | TI 0N |
|------------------------------------|----------------|---|--|--------------|--|--------------------------|------------|-------------------|-------------------|------------------|-----------|------------------|------------------|-------------------|-------------------|----------------|----------|---|-----------------------|
| IN FFFT | ٦ | ν AL | APR | ם되 | DI RECT | ** 450 | A75 | 485 | NAL | APR | بار ر | P CT | ** A 50 | A75 | A 85 | JAN | 404 | 70 | 20 |
| AL AMENA 5000 10000 18000 | 8 | 3 10 19 | 12 4 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 | 0 2 9 | HILL 2 7 14 | 4F9 1 7 15 | 40 m | £10 | -12 -25 | 13 | 7-17 | -2- | -20 | -1 -16 -32 | 1.18 | 5 22 22 | 12 20 20 | 508 5 8 13 | N. N. |
| ALAMEDA ECCO 1CCOO 1ECOO | \$ 4 | 5 17 31 | 10 4 12 24 | 7 9 2 | н UNT 2 9 | SVILLE 3 10 19 | 749 | 2 2 8 | 1.0 | -13 | -2 | -2 -10 -21 | -12 | -9 -19 | -10 -21 -38 | 8011 | 1004 | 17071 2 1 | N. MI. 7 |
| AL AMEDA 5000 15000 18000 | NAS | 1 2 9 1 | 10 10 10 10 | 17 | JUNE 2 2 2 2 4 8 - 8 | AU 0 -2 -10 | 7 6 7 | -5 -11 -23 | -2 | 400 | | 770 | 707 | 8-1-1 | 100- | 10 12 18 | 1 9 11 9 | 1332 N | M |
| AL AMEDA 5000 10000 18000 | NA | -5 -11 -23 | -1 -5 -13 | -13 -13 | 41- | AK -3 -7 -16 | -14 -26 | -11 -16 -29 | w 80 81 | 0 ~ 0 | m + 0 | 7 7 7 | → m & | 4 40 | N 1 1 1 | 18 | 9 1 5 | 689 N | .M. |
| AL AMEDA 5000 10000 18000 | 8 2 | 404 | 10 40 | 2 m s | LARS 3 | ON AFB 1 2 0 | 445 | -15 | 179 | m m 9 | 197 | 127 | 2-1-1 | -8 -12 -20 | -10 -14 -23 | 10 15 22 | 13 | 570 A 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 | N. MI. 112 119 |
| AL AMEDA 5000 10000 18000 | NA S | 16 | 13 12 23 | 2 5 12 | 1111 | LE POCK 2 10 19 | Nmo | E 21 | -17 | -12 | -2 | -1- | -3 -11 -22 | -18 -34 | -9 -20 -37 | *09 | | 649 | N. H. |
| ALAMFDA 5000 10000 18000 | NAS | 6 17 31 | 17 5 11 22 | 9 | L7CK | P 10FNE | 0 % 6 | 7*= | -19 -19 -37 | -6 -13 -26 | 6. 9.1 | -4 -12 -24 | -5 -13 -26 | -10 -20 -36 | -12 | 905 | 4 | 820 A | 1.4[. 7 9 13 |
| ALAMEDA 5000 17000 18000 | 8 | 3 23 | 70 4 9 | 6 2 1 | LUKF 0 5 | AFB 1 6 1 1 3 | 777 | † 17 T | -12 -12 -28 | -3 -10 -21 | - 7 9 | 0 - 1 - 1 3 | -2 | -1 -16 -30 | 11.0 | 21 | 12 | 537 N 6 9 12 | 1. H.1. |
| ALAMEDA 5CC3 10C03 18C03 | MAS | 4 1 1 4 3 3 5 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 | T0 4 12 23 | 2 6 12 | ME 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | PHIS 2 10 110 119 | 7 4 01 | ~~~ | -5 -18 -35 | -4 -13 -27 | -2 | -2 -9 -20 | -4 -12 -23 | 1.8 | -10 -20 -37 | * 0 9 | 4 6 6 7 | 1549 N | 13 13 |
| | | | | | | | | • | | | | | | | | | | | |

*HEADMINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DEWITES ANNUAL FUUIVALENT HEADMINDS FOR INDICATED DER CENT RELIABILITIES. *INUS SIJN DENUTES HEADMINDS.

EQUIVALENT HEADAINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR ROUTES

| HE IGHT | | | | | l u | > | - | 2 | ¥ | 2 | 2 | 3 | 10 | | | 210 | 9 | STANDARD DEVIATION | 1 8 |
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| N H H | | 2 47 | A PR | מ זור | DIRECT UL OCT | ** A5 | A75 | 485 | N | | 3 | PETURN OCT | N | 475 | A 85 | JAN | ŧ | Ę | 100 |
| | | | | | | | | | | | | | | | | | | | |
| ٩ | NAS | | 10 | | MEXIC | 0 C1 TY | | | | | | | | | | | <u> </u> | 625 N. | .14 |
| 0005 | | ~ | 4 | 7 | -5 | 7 | - | 80 | mi | m | | 7 | ~ | 0 | 7 | ~ | • | • | • |
| 1 8 000 | | <u>~</u> * | * = | 77 | 0 m | 0 v | 1 7 | r 1 | -20 | -15 | ~ - | 0 10 | 79 | - 57 | -10 | 13.6 | •= | w ~ | ~ 9 |
| AL AME (IA | NAS | | 2 | | 122 | ST PAUL | _ | | | | | | | | | | - | 359 M. | - |
| C00 | | 5 | • | ~ | 2 | , | c | -2 | .5 | -5 | - | . 5 | - 5 | - 10 | | • | • | • | |
| 1 3000 | | 14 | 97) | 0 | 0 | 2 | • | 2 | - | Ŷ | - 10 | -11 | | - 10 | 61- | 2 | 9 | ~ | • |
| 18000 | | 23 | 11 | 61 | 1.6 | 61 | • | ~ | -29 | -51 | - 20 | -25 | -23 | -33 | M | 11 | 12 | 01 | 15 |
| ALAWFIA | NAS | | 10 | | MINOT | AFB | | | | | | | | | | | - | 1101 | |
| 5000 | | 7 | 4 | 7 | 2 | * | C | -5 | -1 | 4 | -2 | - 5 | -5 | 01- | -12 | <i>•</i> | • | ٠, | • |
| 1000 | | 01 | £ | O | Œ | 'n | - | 0 | -12 | -1 | 6- | | 6- | -16 | -18 | 11 | 0 | • | 2 |
| 16000 | | 13 | 12 | 11 | 14 | 4 | • | | 2 | -17 | 61 - | | - 20 | - 30 | -33 | 97 | 91 | 11 | 91 |
| AL AME DA | VAN | | <u>_</u> | | NELLI | SAFB | | | | | | | | | | | • | 368 M. | |
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| 4 | S AN | | 13 | | NI AGA | PA FALL | rs S | | | | | | | | | | _ | 972 H. | |
| 2009 | | 1 | 5 | | • | • | | 0 | 7 | 9 | † | • | 9- | -11 | -13 | • | | • | |
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| AC AMP DA | V S | | Į. | | PITTS | SAUPS | | | | | | | | | | | - | | |
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*HEADMINDS--COMPUTED FOR A 120-KT AIPSPEFD. **A--DENDTES ANNUAL FOUTVALENT AFADMINDS FOR INDICATED PER CENT RELIABILITIES. **A--DENDTES AFADMINDS.

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR SPEAT CIPCLE AIR ADUTES

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EULIVALENT HEANAINUS AND STANDARD DEVIATION IN CHOTS FOR CREAT CIRCLE ALP PRUTES

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FOULVALENT MEANALNOS AND STANDAPD DEVIATION IN KNOTS FOR CHEAT CIRCLE ALR MOUTES

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EQUIVALENT HEADMINGS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR ROUTES

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EQUIVALENT HEADMINDS AND STANDAPD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR ROUTES

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*HEADMINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES ANNUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADMINDS.

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FOULVALENT HEADHINDS AND STANDAFO DEVIATION IN CAUTS FOR GREAT CIFCLE AIF POUTES

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^{**}A--DEMOTES ANNIAL FGUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES -FEADWINDS.

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNUTS FOR GREAT CIFCLE AIR FOUTES

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EQUIVALENT HEANAINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR ROUTES

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SMEET 33

EGUIVALIVE MENDAINS AND STANDARD REVIATION IN LEGIS ELE CREAT CIPZLE AT EDUTES

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FAULVALENT MEADAINDS AND STANDAFD DEVIATION IN AUDIS FOF GFEAT CIRCLE AIR ROUTES

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| | | ٥ | ٥ | ٥ | ? | ę | 11-1 | | 0 | 7 | | 61- | -22 | 91 | * | 13 | * |

*HEADMINDS--COMPUTED FOR A 120-KT AFRSPEED. **A--DEYNTES ANNUAL EQUIVALENT MEADMINDS FOR INDICATED PFR CENT RELIABILITIES. MINUS SIGN DENOTES MEADWINDS.

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EQUIVALENT HEADWINDS AND STANDAPD DEVIATION IN KNOTS FOR SREAT CIRCLE AIR POUTES

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| STANDARD DEVIATION | שות סכד | 1747 N.MI. 8 10 8 11 11 14 | 1747 N.MI. 6 5 6 8 | 519 N.Mf. 8 6 9 10 10 11 | 1293 N.NI. 6 6 7 7 8 9 | 1522 N.HI. 5 5 6 7 6 7 | 1702 N.MI. | 363 N. HI. 8 8 10 11 12 13 | 877 N.MI. 7 7 8 9 | 1624 N.MI. 6 5 7 5 6 6 |
|--------------------|---------------------|-------------------------------------|--|-----------------------------------|--|---|--|---|-----------------------------------|-----------------------------------|
| DARD | APR | 224 | 9 ~ 0 | 0. = 4 | | -4-0 | ~~0 | 6 = 2 | 6 | _ w w @ |
| STAN | 2 8 | 11 | 9711 | 8 11 17 | 9 8 61 | ° 21 | 9-3 | 12 | - 651 | N 0 0 |
| | A 8 5 | O M W | -11 -14 -31 | -14 -18 -29 | -11 -17 -36 | -8 -14 -34 | -15 -15 | -12 -22 -38 | -12 -20 -38 | -1-2 |
| | A75 | ~ v ® | -10 -13 | -13 -16 -26 | -10 -15 -33 | -7 -13 -31 | -14 | -10 -20 -35 | -10 -18 | - 0 m |
| | ** A 50 | 8 12 18 | 9 1 1 | 7-6-1 | -21 | - 12 | 767 | 727 | -5 -11 -23 | 3 8 1 |
| \$ | RETURN | 111 | 717 | 594 | -2 -6 -14 | -17 | 1-99 | -3 -10 -21 | -3 | 10- |
| 2 | | 0~0 | 640 | 01- | 7 1 8 | 107 | 7 6 8 | 1-1-5-1-1-6-1-6-1 | -5 -5 -12 | 27 8 -3 |
| 0 11 | | 8 18 18 | -10 -24 | -6 -11 -22 | -12 -29 | -6 -10 -28 | -7 -111 -28 | -6 -15 -28 | -1 -14 -31 | 441 |
| H H | Z Z | 8 17 23 | -12 | -11 | -14 | -11 -32 | -3 -13 | -5 -17 -32 | -5 -16 -36 | 046 |
| E N T | A85 | -18 -26 -39 | 004 | -10 | 0=0 | 10 | - T - R | m = 6 | 0 7 6 | -10 -10 -11 |
| AL | 1 | -17 -24 -37 | 0 74 | 000 | ₩ 2 | 12 21 | 0 7 0 | 7 6 2 | 9 | ዋናና |
| V 1 U U | A50 | -10 -16 -25 | 2 4 4 | 9 ~ 6 | 2 8 8 | 20 | H. 8 | 11 22 | 10 10 20 | # 1 # |
| | DIRECT JL OCT ** | TOKYO -12 -20 -31 | 80M8AY 1 4 10 | DHAHRAN 5 5 1 | КАВАСНІ 2 5 13 | LAHORE 1 6 17 | NEW DELHI 1 6 15 | TEHPAN 4 10 21 | ZAHEDAN 4 8 16 | 80M8AY 1 0 -1 |
| | DI JUL | 9- -11- | 011 | 10 | | 13 | ~~~ | 1 2 2 1 | 5 2 2 | -12 -8 -8 |
| | A PR | T0 -9 -14 -25 | 10 9 21 | 10 10 16 | 10 8 11 26 | 10 6 10 27 | 11 11 27 | 70 7 15 26 | 70 7 13 29 | 10 -3 -4 -5 |
| i | JAN | -11 -21 -33 | 111 29 | 5 8 15 | 5 13 32 | 31 | 12 | 16 29 | 5 15 33 | 0 4 6 |
| HE I GHT | FFET | ATTU 5CC0 10C00 18C00 | 8 A GHD A D 5 0 0 0 1 0 C 0 0 1 3 C C 0 | BAGHDAn 5000 10000 18000 | 9 A CHDAD 5 C O O 1 O C O O 1 B C O O | 8 A G HD A D 5 C O O 1 O C O O 1 A O C O | 8 A G H D A D 5 0 0 0 1 0 C 0 0 1 8 C 0 0 | RAGMDAD 5 CCO 1 0 COO 1 9 CCO | RAGHDAD 5CNO 10COO 18COO | 84VGKDK 5C00 1CCC0 13C00 |

^{*}HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED.
**A--DENOTES ANNUAL FOULVALENT HEADWINDS FOR INDICATED PER CENT FELLABILITIES.
*INUS SIGN DENOTES HEADWINDS.

FULLIVALENT MEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR ROUTES

| STANDARD DEVIATION | APR JUL OCT | 668 N. MI. 7 9 7 10 8 8 | 1160 M.Mf. 5 7 7 7 5 8 7 6 7 6 | 1294 NoME. 5 6 6 6 5 7 5 7 7 6 | 457 N. HI. | 1529 N.MI. | 1260 N.MI. 4 5 6 5 7 6 7 7 6 | 521 NoRI. 7 9 7 7 9 7 10 9 9 | 924 N. MI. | 1696 N. MI. 5 7 6 5 7 6 8 7 7 |
|--------------------------------|---------------|---|--|---|------------------------------------|-----------------------------------|---------------------------------------|---------------------------------------|--|--|
| STANDA | A ARL | , 11 | v ~ 0 | W W 40 | A 80 0 | w 0 ~ | • • • | ~ 9 11 | **0 | 少~ ∞ |
| ž | A 85 | 400 | 49 60 49 | -10 | -10 -111 | 552 | n 9 † | -12 -10 -10 | 111 | 14 |
| בוענונ | A75 | 6.1.6 | 41.0 | 440 | 000 | 117 | 755 | 1 0 0 | -10 | -12 |
| 3 | ** 450 | - * * * | 0 7 0 | 004 | 7-7-0 | 076 | -0- | 5 6 7 | 4 2 2 | 69 = |
| N D Se | œ. | 700 | 90 m | 0 - 4 | 4 5 - | Per | B B C | 0 2 1 | 4 - 6 | 4 W R |
| | 3 | ~~~ | 8 0 M | 1,11 | -12 -7 2 | 4 W R | 707 | 77- | -13 | 790 |
| 3 | APR | ~~ ∞ | 21-1-2- | 677 | 7 60 | ₩0~ | 7-0 | 970 | 411 | 2- 2- 1- |
| H E A D W I | | 2 7 13 | 707 | 400 | 061 | 0~= | -2 -1 | 777 | -11 | -2 -11 -23 |
| STANDAND TO THE REAL PROPERTY. | 5 | -7 -12 -16 | -1 | -14 -7 -1 | 2 2 9 | 9- | 4 4 4 | 719 | 171 | † - 0 |
| | \ \{\bar{\}\} | 977 | 979 | -10 -2- | 777 | 244 | 444 | 774 | 705 | 7~- |
| NA SOL | 5 | 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | AF8 -11 | 6 10 4 | 2 4 1 | 707 | TA -1 -1 -2 -2 | 410 | ************************************** | A8 7 7 8 |
| | ' | CALCUTT | CLARK -6 0 -2 | COLOMBO 3 1 | DA NANG -4 3 -1 | 04VAC -5 -1 | 7JAKA6 -4 -2 -2 | HANOI 0 2 3 | HONG K | KADENA -4 3 |
| | ה הור | 444 | တစ္က | 911 | 13 | N W N | -5 -0 -5 | 77 | 10 | ~ 00 |
| COI VAL EN | A P.K | 1 7 7 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - | 10 2 2 | 40 2 3 | E N 4 0 | 10 0 0 | 10 | 70 | E o n n | 40 6 70 |
| | N &C | -1 -7 -15 | 2 2 | iv w v | | 011 | e~- | N N O | 4 20 | 2 1C 18 |
| HE I GHT | FEET | PANGK : 5 CCO 10 CCO 18 CCO 18 CCO | 8 A N G K O K 5 C B O C C C C C C C C C C C C C C C C C | 9 A NGK G R 5 C O U 1 C C C C I R C C C C | 94NGK11K 5CCO 10COC 18COO | 3ANGKUK 5CCO 10000 18CCO | 944GKOK 5000 10000 18000 | 34NGK DK 5000 10000 18000 | 84NGKUK 5C00 10C00 18C00 | BANGKOK 5000 10000 13000 |

*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DEWOTES ANNUAL EQUIVALENT MFADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

EQUIVALENT HEADWINDS AND STANDAPD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR ROUTES

| | | | | -1 | > 0 | 4 | - Z | ۲ پر | z 2 | 2 | * | | | | SIAM | DARD | DEVIA | STANDARD DEVIATION |
|------------|-----|-----------|---------|--------------------|------------|-----|----------|---------|--------|------------|---------------|------------|----------------|------------|------|------------|----------|--------------------|
| FEFT | JAN | APF | ار ا | DIRECT JL OCT * | ** A50 | A75 | A85 | NA L | APR | , JUL | RETURN OCT | **A 50 | A75 | A 85 | NAL | 4 | Ŋ | 00.1 |
| BANGKOK | | 10 | | KAPACHI | = | | | | ı | | | | | | | 1 | 1 666 1 | N. H. |
| 5000 | 7 | -5 | 1- | - | -3 | 8 | 6- | 7 | 2 | ~ | 0 | ٣ | 0 | 7 | 2 | S | | |
| 10000 | -22 | - 27 | ر ا | 0 F | 97 | -10 | -11 | 6 6 | ~ = | 5 | - ~ | ~ < | | ٥, | s o | v « | • | w 4 |
| | | | | | | | <u> </u> | | ; | 1 | 1 |) | | ı | ` | | • | • |
| BANCKUK | | 10 | | W I W | A B | | | | | | | | | | | = | N 6961 | N. H. |
| 2000 | m | ا م | ~ | ?- | ~ : | 7 | -5 | • | 9 | 8 0 | 7 | 4 | 6- | 01- | \$ | • | - | 5 |
| 1 8 000 | 15 | 10 | 4 4 | - | Λ Φ | 0 ~ | 7- | -11 | -16 | | 76 | -13 | -12 | +7- -24 | ~ 0 | • • | ~ ~ | 9~ |
| RANGKOK | | 7 | | A SOUTH | | | | | | | | | | | | | | |
| 5000 | -3 | 4 | - | | | 9- | -1 | ,, | 4 | c | c | _ | - 2 | * | ٠, | | | E |
| 10000 | -11 | 80 | -3 | 7 | q | -1- | -12 | 10 | _ | , m | ~ | • • | 0 | ۰ ٥ | • | , r | • | , r. |
| 18000 | -24 | -18 | ~ | 1 | -10 | -20 | -22 | 20 | 14 | -3 | • | • | 0 | -5 | • | • | _ | ~ |
| 9 A NGK OK | | Ţ | | MANDALAY | A | | | | | | | | | | | • | 7779 | 1 |
| 2000 | - | 0 | - | 3 | - | 1 | -5 | 7 | o | , | - 2 | - | - 7 | 4 | _ | | - 0 | |
| 100001 | 4 | * | 4 | | i Ki | 9 | -10 | • | • | 4 | · - | . ~ | ٠ ٣ | 4 | . 60 | ~ | 0 | . ~ |
| 18000 | -12 | 20 | 7 | 7 | -3 | -15 | -14 | 01 | 1 | ?- | -2 | 7 | -5 | -1 | 12 | 10 | • | • |
| BANGKOK | | 1 | | MEDAN | | | | | | | | | | | | | 7 627 | 2 |
| 5000 | - | - | 60 | | 1 | 9 | -10 | - | • | 7 | • | • | 7 | ï | , | • | | |
| 10000 | 7 | 0 | -2 | 7- | 0 | -5 | 7 | 7 | 0 | - | m | 0 | * | . 5. | . ~ | • | • | ^ |
| 18000 | - | | 0 | | C | • | 9 | 7 | 7 | 0 | 7 | 7 | -1 | 80 | 10 | 80 | • | ~ |
| RANCKOK | | 10 | | NEW DE | DELHI | | | | | | | | | | | = | 1576 N | |
| £ C00 | -3 | 7 | -7 | | ï | 4 | -1 | | • | - | 0 | - | - | - 1 | ٠ | | | |
| 00001 | 01- | -8 | -3 | 1- | 9- | -1 | -15 | 01 | 60 | m | | S | 0 | 0 | • | • | - | • |
| 00081 | -23 | -14 | • | -3 | 8 | -19 | -55 | 61 | 13 | F- | m | • | 7 | -3 | 2 | • | 7 | _ |
| BANGKOK | | 10 | | PENANG | | | | | | | | | | | | | 517 v | A H |
| 2003 | O | -2 | - | Ť | - | 9 | -10 | 0 | • | • | * | ٣ | 1- | -2 | 7 | • | • | |
| COO | 2 | 0 | 0 | £- | 0 | -5 | - | 7 | 0 | 0 | m | 0 | -5 | 9- | 9 | • | • | - |
| 18000 | 0 | | 0 | ၀ | ဂ | Ģ | -1 | 0 | 7 | 0 | 0 | 0 | 9- | 6 0 | 2 | • | • | • |
| BANGKOK | | 10 | | PEI PI NG | ي | | | | | | | | | | | | 1751 N | N. H. |
| 2000 | 7 | 4 | 80 | ?- | 7 | -5 | -3 | -5 | * | 8- | 7 | -3 | 8 0 | 6- | ٠ | • | _ | 5 |
| 10000 | - | ~ | ~ | 7 | - | ī | 4- | 4- | 4- | -2 | 0 | -3 | -1 | 6- | 7 | 4 | _ | • |
| 18000 | • | 4 | • | * | 3 | 7 | -3 | -15 | 6- | * | 9 | 61 | -15 | -11 | 01 | • | ~ | • |
| BANGKOK | | 10 | | PIISAN | FAST | | | | | | | | | | | | | ; |
| 5,00 | • | 2 | - | í | | 7 | î | 7 | 4 | • | • | | c | • | , | - | 966 | · IL |
| 00001 | | 0 | | ۳ ر | ٠ ، | | , | 1 | | 0 4 | 9 [| | | | n • | ٠. | 0 + | Λ, |
| | • | | , , | • 0 | ۰ د | | ۰ د | 7 6 | | , | 2 | 0 ; | | -15 | - (| 0 | - 1 | • |
| 2 | | | • | • | , | • | | | | 1 | • | | 1 | - | | | | |

^{*}MEADWINDS--COMPUTED FOR A 12C-KT AIRSPEED. **A--DE: TES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIG. DENTES HEADWINDS.

EQUIVALENT HEADLINDS AND STANDARE DEVIATION IN KNOCK . OFFAIT CIRCLE AT FOUTES

| STANDARD SEVIATION | A APP JUL OCT | 2000 | 1549 NeMI. | 779 N. M. | 1355 M. M. 6 5 7 7 6 9 7 7 7 | 8 7 8 7 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 1093 N.MI. | 1862 4. FI. 6 6 5 7 9 9 7 9 4 14 9 13 | 1245 Wells | 10 9 8 10 9 15 15 16 16 16 16 16 16 16 16 16 16 16 16 16 |
|--|---------------|------------------------------------|-------------------------------------|-----------------------------------|---|---|-------------------------------------|--|-----------------------------|--|
| | 95 JAN | F-9.9 | 3.55% | 75. | 277 | 728 | | - | | |
| | A75 4 | 7 7 F | 61- 61- | 7*1 | 10 -10 -10 -10 -10 -10 -10 -10 -10 -10 - | -2 -3 -14 -16 -30 -33 | 1 4 4 | -13 -14 -22 -24 -36 -41 | -14 -15 -24 -36 -40 | 11- 13- 11- 11- 12- 22- |
| | 05 8480 10 | ۰۳۰ | 777 | 6.16 | 77.9 | 2 - 1 | 0 6 5 | -6 -6 12 -15 20 -27 | -9 -8 15 -15 72 -27 | |
| 50: | ים הר | 74. | 4 4.4 | (*, - , | 8 4 C | | 22.01-11-0 | -5 -6 -9 -12 -18 -20 | -5 -9 -11 -15 -22 -27 | 7 9 5 |
| HEADAI | SER NES | -70 | -2 -6 -10 -8 -23 -1- | 777 | 9 : 1 : 5 ; - 1 | 1 - 13 -7 -13 -19 | 0 0 -15 -9 -30 -22 | -10 -4 -23 -15 -39 -21 | | -77 -77 |
| 1 1 2 | 305 | ,177 | r 1° | 748 | (m) c > 7 | # 70 | , o o | c • 2 | 0.01 | 171 |
| THE RESERVE AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO PERSONS ASSESSMENT OF THE PERSON NAMED IN COLUMN TWO PERSONS ASSESSMENT OF THE PERSON NAMED IN COLUMN TWO PERSONS ASSESSMENT OF THE PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO PERSON NAMED IN CO | 375 | 172 | . 7 ~ - ' | 117 | 9-10 | 707 | 9-5 | WCAS 1 6 | 2~2 | 777 |
| C U : V A L | 050.00 | c m ↑ á | CHAI 3 | 25 CT | , m.o.o. | 1 7 7 2 X | #FLL AF | ۲ م م | 260 27.2 | , , , , , , , , , , |
| F F F | :: | 9 7:-1 | SHANCHA -3 1 | # #117 | 141 | Seb 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | CARSAF | ± ° = ≈ | CHIC:60 | CHUGCHI 5 5 6 |
| 16 | 305 | ~~~ | 8.25 | 707 | 700 | 7~0 | , N m & | 207 | 222 | ~* 2 |
| | APE | 2 | 50 | Favo | E y n z | £ 7 - 2 | £0#2 | F - E E | £ ° 12 | Enmo |
| | 720 | · | | ; | | 7=2 |)°2% | ∜⊼ ₽ . | . ° 52 1. | , 014 |
| HE I GHT | FFFT | 3 ANGKUK 5000 10000 18000 | 98 NG CK COU 1 CCCC 1 RGOO | 4ANGKCK 5303 13000 19000 | 94NGKON 6000 10000 1-000 | 90 1 SE 5000 10000 13000 | 90 1 SC 5000 1 0000 1 8000 | 90 TSE 5000 10000 18000 | 10000 10000 18000 | 401SE 5000 10000 19000 |

MINUS SIGN DEPOTES HEADAINS.

CT LESHS

FOULVALENT HEADWINGS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE ALP POUTES

| The Ref Jul (RECT) The Coppus Chalster | | | | ų. | S OF Y | 4 | ENT | H E A | , | ر ا | S ¢ | | | | STAN | DARD | 2730 | STANDARD DEVIATION |
|--|------|----|----------|--------------|-------------------|-----|-----|------------|-----|------------|---------------|------------|----------|--------------|---|------|------------|---|
| 1120 | AC | 4 | וטנ | TRECT OCT | ** A50 | A75 | ₹0 | NTT | APR | | SETURN OCT | * | ~ | | JAN | * | 3 | 000 |
| 10 | | Ţ | _ | | | 118 | | | | | | | | | | | 320 A | <u>;</u> |
| | 1 | ١ | 1 | | 7 • | 77 | 4.1 | 7 | 71 | w c | | ~ 4 | 2 | | • | ~ • | % P | ~ • |
| 1937 | - | _ | , ~ | | • | • • | 7 | -26 | - | * | - | - | -27 | -30 | 2 9 | - 1 | • • | * = |
| 22 13 12 2 13 17 2 13 1 -11 -12 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 | | 1 | _ | | A | | | | | | | | | | | 7 | 637 | E . |
| 22 13 12 14 14 14 17 -24 -15 -12 -14 -16 -23 -25 19 9 9 7 7 10 -12 11 10 10 10 10 10 10 10 10 10 10 10 10 | - | | ٥ | | | 2 | - | -11 | -8 | 9 | 80 - | 6- | -14 | - 15 | 6 | | • | • |
| 70 EDMONTON. | N.W. | | 71 | | \$1 5.7 7.7 | n 9 | - • | -24 -40 | -15 | -12 | -14 | - 16 | -23 | -25 | 251 | • = | ~ 0 | •= |
| S | | ₽ | _ | EDMO | NT ON | | | | | | | | | | | | | |
| -2 - 1 | | | | | | 1 | -5 | 9 | 7- | 0 | -3 | -3 | -10 | -12 | 11 | | | 2 |
| TO FELLINATION AFB TO FILLIANTON AFB TO FLUENCIN AFB T | • | | | | C | -1 | 8 | 7 | 7 | - | - 5 | -3 | -10 | -12 | 12 | = | • | ======================================= |
| 10 | 1 | | | | ?- | -14 | -11 | -5 | | 9 | 4 | -5 | 91- | -19 | 61 | 1.0 | 1 | 2 |
| 1 | | | _ | | | | | | | | | | | | | | | |
| 10 10 4 9 9 1 1 -17 -11 -4 -10 -11 -18 -19 9 9 1 1 -17 -11 -4 -10 -11 -18 -19 9 9 1 1 -17 -11 -2 -2 -33 -36 15 16 16 16 17 18 -19 17 18 -19 18 18 18 18 -1 -2 -3 -3 -5 -11 -21 -22 -33 -36 15 16 16 16 16 16 16 16 16 16 16 16 16 16 | | | | | 7 | 7 | ~ | 1 | î | 7 | -3 | - | | 6- | • | • | | 1 |
| TO EFFELSON AFB 1 | - | | 4 | | e | • | - | -11 | -11 | * | -10 | - 11 | -18 | - 10 | • | • | - | • |
| TO EFFESON AFB -7 -2 -3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 7 | | ~ | | 11 | € | • | -33 | -25 | -11 | -21 | - 55 | -33 | - 36 | 15 | = | • | 13 |
| 1 2 0 0 0 -4 -5 -2 -2 0 -1 -2 -6 -8 | | 10 | _ | FIEL | | | | | | | | | | | | | | L M. |
| TO FLLINGTON AFB TO FLLINGTON | | | 0 | 0 | 0 | 1 | -5 | ~ | -5 | 0 | 7 | -5 | 9- | • | • | • | • | ~ |
| TO FILINGTON AFB 0 0 -2 0 -4 -5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 | • | | 7 | | ~ : | 7 | 7 | 5 | - | ~ | 7 | | | -5 | 10 | • | ~ | • |
| TO FILLINGTON AFB 12 | 1- | | ī | | 7 | -23 | -23 | 12 | ~ | 4 | ~ | • | 6 | -5 | 15 | 2 | = | 13 |
| 12 | | | | FIL | NOTON A | F.8 | | | | | | | | | | - | | . IN . |
| 12 | - 1 | | 1 | 0 | 7 | 4 | ~ | 0 | 0 | 7 | 0 | 0 | • | -5 | • | • | • | ~ |
| TO ELLSMORTH AFB 7 5 4 6 5 0 -1 -7 -5 -3 -6 -6 -12 -13 10 9 17 5 4 6 5 0 -1 -7 -5 -3 -6 -6 -12 -13 10 9 17 9 9 13 11 4 2 -18 -10 -9 -13 -20 -22 11 11 26 18 21 22 21 10 7 -30 -21 -22 -25 -37 -40 20 19 13 70 ELMFNONDF AFA -9 -3 -4 -1 -5 -11 -13 6 11 9 -20 -9 -10 -14 -13 -23 -26 14 4 7 8 8 -1 -3 16 14 12 70 EL TORO MCAS -3 -2 0 -1 -3 -4 -5 11 -3 -4 -5 16 14 12 -3 -2 0 -1 -2 -7 -8 3 -1 4 7 8 8 -1 -3 16 14 12 -3 -2 0 -1 -2 -7 -8 3 -1 4 0 0 0 -7 -10 13 12 8 | | | | | • : | 0 1 | 7 | -14 | 8 | 1 | - ! | P : | 51- | 91- | 2 | • | ~ | • |
| 7 5 4 6 5 0 -1 -7 -5 -3 -6 -6 -12 -13 10 9 7 17 5 4 6 5 0 -1 -7 -5 -3 -6 -6 -12 -13 10 9 7 18 17 9 9 13 11 4 2 -18 -10 -9 -13 -20 -22 11 11 9 12 2 12 22 -25 -25 -37 -40 20 19 13 12 9 13 10 2 0 1 0 -4 -5 -1 -2 0 -2 -1 -7 -8 9 7 6 12 0 -2 -9 -10 -14 -13 -23 -26 14 4 7 8 8 -1 -3 16 14 12 0 0 -4 -5 -1 -2 0 -1 -3 -4 -5 11 9 6 14 12 0 0 -4 -5 -1 -3 -4 -5 11 9 6 14 12 0 0 -4 -5 -1 -3 -4 -5 11 9 6 14 12 0 0 -4 -5 -1 -3 -4 -5 11 9 6 14 12 0 0 -4 -5 -1 -3 -4 -5 11 9 6 14 12 0 0 -4 -5 -1 -3 -4 -5 11 9 12 12 12 12 13 12 12 12 13 12 12 13 12 12 13 12 12 13 12 12 13 12 12 13 12 12 13 12 12 13 13 13 13 13 13 13 13 13 13 13 13 13 | 7 | | | | 3 | • | - | ٠, | 17- | - | /1- | | - 30 | -33 | 91 | 2 | 0 | : |
| 17 9 9 13 11 4 2 -18 -10 -9 -13 -13 -10 9 7 18 21 22 21 10 7 -30 -21 -22 -25 -37 -40 20 19 13 26 18 21 22 21 10 7 -30 -21 -22 -25 -37 -40 20 19 13 TO ELMENDAFARA -9 -3 -4 -1 -5 -11 -13 6 1 3 0 2 -4 -5 11 9 8 -20 -9 -10 -14 -13 -23 -26 14 4 7 8 8 -1 -3 16 14 12 TO EL TORO MCAS -3 -2 -1 -2 -7 -8 3 -1 4 0 0 -7 -10 13 12 8 6 | | | | ELL | | æ | | | | | | | | | | | | . H. |
| 17 9 9 13 11 4 2 -18 -10 -9 -13 -13 -20 -22 11 11 9 26 18 21 22 21 10 7 -30 -21 -22 -25 -37 -40 20 19 13 10 2 0 1 0 -4 -5 -1 -2 0 -2 -1 -7 -8 9 7 6 1-9 -3 -4 -1 -5 -11 -13 6 1 3 0 2 -4 -5 11 9 8 1-20 -9 -10 -14 -13 -23 -26 14 4 7 8 8 -1 -3 14 12 10 EL TORO MCAS 13 -2 0 1 1 -3 -4 -1 -3 -4 9 8 6 14 12 1 -3 -4 -1 -2 -7 -8 3 -1 4 0 0 -7 -10 13 12 8 | | | . | | 5 | 0 | 7 | - | -5 | -3 | 9 | 9 | -12 | -13 | 01 | 0 | ~ | • |
| TO ELMFNOMERA 1592 N 1592 N 1592 N 1592 N 1592 N 1592 N 1593 N 15 | - ~ | • | ~ ~ | | | • • | ~ ~ | 8 5 | -10 | - 1 | -13 | - 13 | -20 | -22 | ======================================= | = : | • | =: |
| 70 ELMFN,DDF AFA 0 2 -1 -7 -8 9 7 6 -9 -3 -4 -1 -13 -6 1 3 0 2 -4 -5 11 9 6 -20 -9 -10 -14 -13 -23 -26 14 4 7 8 8 -1 -3 16 14 12 70 EL TOPO MCAS -3 -2 0 -1 -2 -7 -8 5 2 0 1 1 -3 -4 9 8 6 -3 -2 0 -1 -2 -7 -8 5 2 0 1 1 -3 -4 9 8 6 -3 -2 0 -1 -2 -7 -1 -3 -1 4 0 0 -7 -1 0 13 12 8 | 1 | • | • | | • | • | • | ₹ | ; | , | : | | | • | 3 | : | | : |
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*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

FOULVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GPEAT CIRCLE ARM ROUTES

| HE 13HT | | | | u. | 0 U I V | A L | E N T | H E A | 0 | I N | | | | | STAN | DARD | STANDARD DEVIATION | 11 ON | ı |
|------------|------|--------|----------|-----------------|------------|-------|----------|----------|------------|------|----------------|-------------|-----|-------------|------|------------|--------------------|----------|---|
| IN FFET | JAN | A PP | חחר | DIRECT L OCT | ** A5.0 | A75 | A85 | NAU | APR | JUL | a ETURI OCT | N **A 50 | A75 | 485 | ٦٩٢ | A PR | a a | 20 | 1 |
| | | • | | i | | | | | | | | | | | | • | | : | |
| 40 I SE | - | | c | Ş - | LAND AFB | 1 | 4 | - | ī | c | 7 | 7 | - | -1 | ~ | ⊤ ≪ | 2 | - | |
| 10000 | 7 [| • • |) M | - 00 | 0 60 | - | 0 | -16 | -10 | ř | • 6 | 101- | -17 | -18 | 2 | 0 | ~ | • | |
| 18000 | 25 | 18 | . | 17 | 15 | • | • | -32 | -23 | - 10 | -20 | - 20 | -35 | -35 | 91 | 15 | • | = | |
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| AN I SE | | 5 | | FOR | T 81 155 | | | | | | | | | | | | 865 18 | M. M. | |
| 5000 | 9- | - | • | | ; ' | 60 | q | • | - | 1 | ď | 4 | 0 | G | , | _ | • | | |
| 10000 | er: | 4 | 0 | | m | 7 | 4 | 6 | 1.5 | 0 | . 6 | 1 | -11 | -13 | == | 0 | | • | |
| 18000 | 14 | • | 0 | | • | Ţ | 9 | -22 | -15 | -3 | | - 15 | -25 | -28 | 61 | 11 | - | 2 | |
| BOTSE | | 10 | | FOR | T BP AGG/ | POPE | | | | | | | | | | - | 1786 M. | 1 | |
| 2000 | 60 | 1 | | | 9 | - | 0 | -10 | -1 | 4- | 9- | -1 | -12 | 41 - | • | • | | 7 | |
| 10000 | 17 | 13 | • | 12 | 13 | 7 | 8 | -22 | -14 | • | -12 | +1- | -21 | -23 | 0 | • | 1 | • | |
| 18000 | 33 | 23 | 16 | | 77 | 13 | 1 | -39 | -27 | -11 | -26 | - 26 | -38 | -41 | 15 | * 1 | • | ± | |
| 80156 | | 10 | | FOR | T CAMPBELL | | | | | | | | | | • | | 1374 M | A. N. | |
| 2000 | • | 8 | | 5 | * | | -5 | -1 | 9- | - | 1.5 | 9- | -11 | -13 | • | • | | • | |
| 10000 | 19 | = | 60 | 12 | 12 | 5 | * | -20 | -12 | 80 | -13 | -13 | -21 | -22 | 01 | 0 | • | • | |
| 18000 | 31 | 21 | 16 | 22 | 21 | 12 | • | -36 | -25 | -11 | -25 | | -36 | -39 | 91 | 15 | 0 | 2 | |
| | | 10 | | FOR | T CAPSON | | | | | | | | | | | | 595 N. | , H | |
| 2000 | 7 | 0 | 1 | | | • | 7 | _ | 0 | 2 | 7 | - | -3 | † | • | | • | ~ | |
| 10000 | | 60 | 5 | | | - | 0 | +1- | 6 0 | -5 | 6- | 6- | -17 | -10 | 12 | 2 | • | 2 | |
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| ROISE | | 10 | | 90.3 | T FUSTIS | | | | | | | | | | | | N OIN | - | |
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| 10000 | 22 | 1 | 11 | | 14 | 60 | - | ~ | -15 | -12 | | - 16 | -23 | -25 | 0 | • | - | • | |
| 1 9 0 0 0 | 35 | 23 | 20 | | | 15 | 13 | -40 | -27 | -21 | -28 | -28 | -39 | 745 | 15 | = | • | ± | |
| ROISE | | 10 | | FOR | T MOOD | | | <u>.</u> | | | | | | | | - | 1157 | # T | |
| 5000 | 0 | 7 | ı | 7 | | -7 | 40 | 0 | 0 | ** | - | 0 | • | 5- | • | • | | - | |
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| E C00 | 7- | Ē | -2 | -3 | 1 | • | ٩ | 4 | 4 | • | 6 | E | 0 | 1- | _ | - | * | 1.5 | |
| 10000 | 9 | 2 | 7- | | | -5 | -1 | -7 | -3 | - | -2 | -3 | -10 | -12 | 12 | 0.7 | • | 9 | |
| œ | 80 | 5 | -3 | | | 9 | <u> </u> | -17 | -11 | 0 | 6- | 9 | -21 | -24 | 20 | 1.0 | 11 | 91 | |
| CANTERCANA | - '(| CALLED | | • | 14 TV-08 | 10000 | 6 | | | | | | | | - | | | | |

*HEADWINDS--COMPUTED FOR A 120-KT ATMSPEED. **A--DEMOTES ANNUAL FOUTVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. **A--DEMOTES SIGN DENGTES HEADWINDS.

FOULVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE ALP POUTES

| NO 11 | 00 | | . 23 | | 22 | | 13 | F-25 | E ~ ~ E | :: | | | |
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| STANDARD DEVIATION | JUL | 409 N. | 10 | 988 M. | •= | 341 4. | 6 52 | 485 H. | 631 K. | 4 · · · · · | 070 N. | 1235 N. | 240 M. |
| DARD | 4 | 100 | 12 | • | 17 | • | 13 | 13 | | -01 | | ~ 22 | - 27 |
| STAN | JAN | 6 | 2 | • | 12 | = | 22 | 3112 | - 651 | -22 | •:: | 1100 | 13 |
| | A 85 | -14 | 14- | -12 | -22 | • | 77 | 177 | -10 -20 -37 | *** | 774 | -15 -24 -41 | -19 |
| | A75 | -13 | -36 | -11 | -20 | 7 | 7- | 4 H W | 177 | -16 | 110 | -14 -22 -38 | -17 -33 |
| | **A 50 | -7 -14 | -21 | 5. | -13 | - | 9 1 | N 4 P | 4 77 | -20 | 061 | -15 -27 | 19 |
| * | RETURN DCT | -14 | -27 | 5 | -13 | 0 | e 91 | m + 4 | -10 | 0 1 0 0 7 | 0 8 67 | -8 -15 -27 | -20 |
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| 3 | 1 1 | -7 -13 | -25 | -5 | -11 | - | 12 | 4 m W | -15 -25 | -22 | 0 - 17 21 | -12 | 0 7 7 |
| HEA | 1 4 | -9 -21 | -31 | -2 | -19 | - | 13 | 484 | -18 | -15 -15 | 1100 | -10 -21 -35 | -14 |
| E N T | < □ | 1-15 | = | -5 | m eo | 6 | -19 | -10 -15 -28 | 400 | 704 | 707 | 0 5 1 | 977 |
| A L | | 0.4 | 13 | MORTH -1 | *= | 9 | -17 | -14 | 7 40 | è → • | pon | 0 - 4 | 900 |
| > 1 0 | ** 450 | KNCK 5 13 | 23 | LE AVENUORT | 11 21 | LEWIS -2 | -8 -20 | 080 -2 -6 -13 | RUCKER 2 10 18 | SILL -1 8 | MOLTERS -1 7 14 | ITCHELL | AFB -1 7 15 |
| M M | L I | FORT 6 | 23 | F 09 T | 12 | FOP T | -51 | F0PT -2 -5 -11 | FORT 3 10 19 | FORT 0 0 17 | FORT | GEN H 7 14 24 | # 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- |
| | DIRECT JUL DC 1 | 40 | 1.0 | m | 11 | ~ | -14 | 19-19 | 251 | 7 4 9 | 7 ~ ~ | 5 22 | 0 + 0 |
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| | NAL | 8 70 | 32 | | 30 | ~- | -15 | 1 0 1 | 16 28 | 0 14 25 | 0 13 23 | 9 20 31 | -2 13 23 |
| PF 1GHT | FEET | 80 I SE 5000 1 0000 | 18000 | 90 I SE 5 C 0 0 | 10000 | 90 LSF 5 C 0 0 | 10000 | 80 1 SE 5000 1 0000 1 8 000 | 901SE 5000 10000 18000 | 10 000 10 000 18 000 | 90 1 SE 5 C C O 1 C C C O 1 B C C C | 8015E 5000 10000 18000 | 801SE 5000 13000 18000 |

*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENDTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR FOUTES

| STANDARD DEVIATION | 9CT | N. HI. 7 | #. 10 0 4 | 4.MI. | . H | N. MI. B 10 15 | N.MI. 10 13 | | M. H 1. | N. H. L. 6. |
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| ARD | A PR | 100 | 9 6 51 | 13 9 9 5 | 8 0 9 1 | 8 0 5 | 213 | 2009 | 1000 | ~= 5 |
| STAND | JAN | 9 6 51 | 201 | 25.4 | 27 28 | 10 12 17 | 11 12 53 | 9 10 17 | 6 91 | 13 |
| | A 85 | -12 -22 -38 | -12 -22 -39 | -11 -21 -37 | 8 5 5 | N F O | 80 1- 80 | -10 -21 -38 | -15 -24 -42 | -2 -12 -24 |
| | A75 | -11 -20 -35 | -10 | -10 -19 | 777 | 477 | 91.0 | -19 -35 | -14 -22 -39 | -1 -10 -21 |
| | **A 50 | -6 -13 -24 | -5 -13 -24 | -5 -12 -23 | -1 | - * = | 0 19 18 | -3 -12 -23 | -8 -15 -28 | 2 6 8 |
| \$ | RETURN OCT | -5 -11 -23 | -12 -24 | -10 -22 | 708 | 0 7 7 1 7 1 7 1 7 1 | 000 | -3 -11 -23 | -8 -14 -28 | W 7 W |
| 2 | JUL | -3 -7 -14 | -13 | -5 -6 -13 | 450 | 2 5 6 | W W 4 | 7 9 1 | -5 -11 -21 | ~ = 0 |
| 7 | APR | -6 -13 -26 | -5 -13 -25 | -5 -13 -26 | 5 m 4 | 0 4 8 | 046 | -111 | -1 -14 -26 | -10 |
| E A | JAN | -7 -20 -36 | -7 -20 -36 | -19 | 1 9 4 | 2 6 8 1 1 8 | -1 9 15 | -4 -18 -34 | -10 -22 -38 | 4 -1 -16 |
| E N T | A85 | 1.66 | 7 6 6 | 228 | -6 -14 -27 | -16 -30 | -16 -33 | 422 | ر 12 | -9 -7 -12 |
| A L | A75 | 0 % 11 | 0 2 11 | 145 | -12 -24 | -14 -14 -28 | -14 -29 | 26.6 | | 8- 51- |
| U I V | ** A5 0 | P A4F 4 | SVILLE 4 11 23 | CKSONVILLE 3 3 3 9 10 9 18 | AU 3 | к -2 -17 | N AFB -11 -15 | F FOCK 2 2 13 19 | 00FNE 5 14 24 | AFR -3 |
| FC | DIRECT IL OCT | HUNTE 10 20 | HUNTS 4 11 21 | JACKS 3 9 19 | JUNEA 0 -1 -14 | K091A -1 -5 -18 | LAF SON 0 -1 -16 | 1177L 3 10 20 | LOCKP 7 14 24 | LUKE |
| | JOL | E ~ E | 3 | 2 2 111 | 010 | -13 -13 | 13 | 1 6 13 | 5 11 20 | 7 7 6 |
| | APF | T0 5 12 22 22 | 70 5 11 21 | 70 4 11 21 | 10 2 -4 -10 | 10 0 -5 -13 | 10 -5 -13 | 10 10 20 | 70 7 12 22 | -13 22 3 |
| | JAN | 6 18 30 | 6 18 30 | 11 29 | 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - | -3 -12 -24 | 0 -11 -23 | 17 29 | 9 21 33 | 4100 |
| HE I GHT | FFET | ACTSE C000 | 80 1 SE 5 C O O 1 0 C O O 1 8 O O O | RO I SE F C 0 0 I C C C 0 I B C 0 0 | 80175 5000 10000 18000 | 801SF 5000 10000 18000 | BP 1SE 5000 10000 18000 | 80 ISE 5000 10000 16000 | AC 156 5000 1 0000 1 8000 | 3018F 5000 10000 |

*HEADMINDS--COMPUTED FOR A 120-KT AIRSPRED. **A--DENUTES ANNUAL FOULVALENT HEADMINDS FOR INDICATED PER CENT HELIABILITIES. PINUS SIGN OFWOTES HEADMINDS.

EQUIVALENT HEADMIN'DS AND STANDAFD DEVIATION IN KNOTS FOR GREAT CIPCLE AIP POUTES

| | APP | Jul | OTRECT | ** A5 0 | 475 | 485 | NAL | APR | JUL | RETURN OCT | ** 450 | A75 | A 8 5 | JAK | * | זור | 100 |
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| | 10 | | ME MPH | 51 | | | | | | | | | | | | 1314 N | N. M. |
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| 17 | · = | • | 1 | | 4 | ~ | -19 | -12 | ~ | -12 | | -20 | -22 | 10 | 2 | 60 | • |
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| ר ר | P - | ר י | î | , , | 1 | 2 1 | | ָר פ | 9 0 | • 6 | 7 | | • | 9 1 | ۰ ۵ | • 4 | 0 1 |
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OMEADMINDS--CUMPUTED FOR A 120-KT AIRSPEED.

OOA--DENJTES ANNUAL EQUIVALENT MEADMINDS FOR INDICATED PER CENT RELIABILITIES.

MINUS SIGN DENGTES MEADMINDS.

EQUIVALENT HEADMINGS AND STANDARD DEVIATION IN ANDTS FOR GREAT CIPCLE AIR ROUTES

| 0.450 A75 A89 Jah A91 Jul A91 Jul A92 Jul A92 Jul A92 Jul A93 Jul A94 Jul A94 Jul A94 A9 | L | | I | | | | | | | | | | | | | | | | |
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| TO COVARIO AND | <u>.</u> | 115 | APG | 3 | 2 | 05400 | A75 | 455 | 4 | | 305 | 00.1 | | A75 | • | SAL | | ¥ | 5 |
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*** PENDENGTES AWOUL FOUT VALENT MEADWINDS FOR INDICATED PER CENT DEL JABILITIES.

EQUIVALENT HEADAINDS AND STANDARD DEVIATION IN ANDES FOR GREAT CIPCLE ARE POUTES

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HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED.
 **A--DENUTES ANNUAL EQUI VALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES.
 MINUS SIGN DENOTES HEADWINDS.

FULL ALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE ALP ROUTES

| STANDARD DEVIATION | JAN APP JUL OCT | 1185 | 10 9 8 6 | 973 N.MI. | 1426 | 1176 N. MI. 6 6 7 6 7 7 7 6 11 11 8 8 | 915 No MI o | 7 7 9 7 9 7 9 9 9 9 8 10 8 10 8 10 8 10 8 10 8 10 8 | 1290 N.MI. 5 5 6 6 6 5 7 6 9 8 7 7 | 7 7 8 6 8 6 13 12 9 10 | 1246 N.MI. 5 5 6 6 6 5 7 6 9 8 7 7 |
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| | A75 | -1 | -12 | 61- | -15 | 7-0 | 100 | -10 -16 -24 | 697 | 700 | 4000 |
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*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED.
**A--DENJIES ANGUAL FOULVALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES.
**A-TOUS SION DENGTES HEADWINDS.

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THE BILLY VERTOL COMPANY

| STANDARD DEVIATION | A PP JUL OCT | 1747 | | 1263 N.P. | | 1833 NeMI: 6 7 5 6 7 6 | 1563 N.MI. 5 5 6 5 7 5 7 7 6 | 1816 N.MI. 6 7 5 6 7 6 8 7 7 | 1536 M.MI. 5 6 5 6 6 6 10 7 8 | 309 N.MI. 13 9 11 12 10 12 18 11 18 | 1301 % MI. 10 7 9 11 8 10 15 9 15 | 856 N.MI. |
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| H E | 7.8% | f | -13 | } | 797 | -18 -39 | 1.2.2 | -17 -17 -36 | 33 | -19 -19 | -12 -26 -4 | |
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**FADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENTES ANNUAL FOULVALENT HEADMINDS FOR INDICATED PEP CENT RELIABILITIES. MINUS SIGN NEWERS AFADMINDS.

SHEFT

FULLVALENT HEADMINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR POUTES

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| V 1 V | ** A50 | RCH1LL 0 | ? ? | | CHPI | ٠ | S | AF 8 | e | 54 | ONTON | 0 | <u></u> | | 418 | • • | 18 | INGT ON AF | 0 | 12 | SWCFTH AF | 7 | 7 1 | | F) MCAS | 7 (| ָר ק | 63 | AND AFR | ~ (| |
| r. | OIPFCT JL OCT | CHURC | 7 4 | ` | CORPUS | ~ | 80 | DOVER | ` : | 22 | PDMGB | ဂ | -15 | | 4617 | ~ | 11 | ELLIN | 7 | 13 | FLLSW | 7 | 7 4 |) | FL TOE | ۸ ، | { ' | ` 1 | _ | 4 | |
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| | APF | · 0 | 77 | • | 10 | 4 | 11 | 10 | 6 7 | 6.7 | 10 | 0 | 9- | | ٦. | 7 | 27 | 10 | 0 | 50 | C | ۴ | 7 1 | | | \ | -11- | | 10 | 4 ; | |
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*HEADMINDS--COMPUTED FIRE A 120-KT ALESPEED. ***-OF: TES ARMUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT FELTABLITIES. *INDS SIGN INFRITES HEADMINDS.

FOULVALENT HEADMEND AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR POUTES

| N AFB T') FORT BENNING -2 -9 -6 -5 -5 -5 -5 -5 -5 -5 | HE 1 CH. | | | | | ۸ ا ا | 1 | N | HEA | 3 | 0 1 | \$\$ | | | | STANDARD | | DEVIATION | NO 1 |
|---|----------|------------|---------------------|-------------|---------------|-----------------------------|----------------------|-------------------|-------------------|------------------|------------|--|------------------|-------------------|-------------------|----------------|-------|--------------------|-----------------------|
| 4 AFB | Fret | 747 | | וור זוור | | ** A5 | 7.5 | A8 | JAN | APK | 3 | ETUK OCT | : | A75 | A 85 | JAN | 84 | 701 | 100 |
| 21 16 4 9 11 3 1 -22 -17 -4 -9 -1 -1 -1 -1 -22 -17 -4 -9 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 | | | 10 | • | £08T | BE NNI NG | | -5 | 9 | 9 | † | | -1 | -13 | -15 | = | = | 7 | . · · |
| 4 AFR - TO FORT BLISS66 - 12 - 14 - 19 - 11 11 11 11 11 6 - 6 - 6 - 6 - 6 - 6 | 00081 | 21 | 16 29 | 40 | 6 8 | 111 | ₩ \$0 | 1 5 | -22 | -17 | 19 | 12 | -13 | -22 | -24 | 11 | 12 | • • | 12 |
| 11 9 6 6 7 1 1 0 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 | - | | -1- | 2 4 23 | FOP 1 | _ | | -14 -19 -34 | 9 1 1 0 | 9 = 8 | 4 0 | 4 0 0 | 5 1 12 | 00- | 7 7 7 | 11 13 21 21 | 2 7 5 | 219 N. | |
| 1 AFR TO FORT CAMPBELL 23 17 6 10 13 4 2 -24 -18 -0 -11 -2 -24 -18 -0 -11 -2 -24 -18 -0 -11 -2 -24 -18 -0 -11 -2 -24 -18 -0 -11 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 | - | | 19 9 16 30 | 000 | FORT 6 9 | 98AGG/1 | PDPE 1 5 15 | O M 80 | -12 -25 -44 | 1 - 6 | 997 | 1 - 2 | -8 -15 -26 | -15 -24 -41 | -17 -27 -45 | 111111 | 212 | 200 N. | . H. |
| 1 AFB TO FORT CARSON | _ | NM | 10 8 17 29 | | FOPT 6 10 119 | 468E | | | -10 -24 -42 | -9 -18 -32 | -10 | 1 - 2 | -15 -25 | -15 -24 -41 | -11 -21 -45 | 12 12 13 | 12 | 763 M. 9 10 | H1. |
| AFR TD FORT EUSTIS 25 119 8 111 14 7 5 -26 -19 -9 -11 - 41 29 12 21 23 12 10 -45 -32 -13 -25 - 41 29 12 21 23 12 10 -45 -32 -13 -25 - 41 4 9 -1 5 5 -2 -4 -16 -11 1 1 -6 -1 24 20 1 13 13 0 -1 -32 -25 -1 -16 -1 4 AFR TT FORT HUACHUCA -3 -4 -2 0 -3 -8 -10 3 4 2 0 -14 -12 -4 -6 -9 -17 -19 13 12 4 6 -32 -27 -8 -14 -19 -33 -37 27 24 8 12 3 4 2 0 -9 -17 -19 13 12 4 6 -3 -14 -15 -4 -6 -9 -17 -19 13 12 4 6 -3 -14 -15 -4 -19 -33 -37 27 24 8 12 | _ | • | 17 | | FOR 42- | | -11 -11 -22 | -14 -26 | | | 970 | | 10- | -11 | -13 -9 -12 | 77.7 | 112 | 267 N. 10 12 | .H. 221 |
| 1 AFB TO FORT HOOD | | | 19 18 29 | _ | F OR T | USTI 8 14 14 23 | 2 7 12 | 0 4 0 | -12 -26 -45 | → ← M | 199 | 1 - 2 | | -16 -25 -42 | -17 | 1111 | 1223 | 307 M. | F |
| : AFB TOPT HUACHUCA -3 -4 -2 0 -3 -8 -10 | | | ~ | | F0P1 2 5 5 13 | 4000 | 700 | p 4 = | -16 -16 -32 | -1 -11 -25 | | 11- | -1 -8 -17 | -9 -17 -33 | -11 -20 -37 | 13 13 20 | 12 | 349 26 11 | .H. |
| : AFB IO 9 7 6 7 0 -1 -11 -9 -7 -7 | | | -1-2 | | | -3 -9 -19 | 4 11 | -10 | 13 | | N 4 80 | 0 9 7 17 9 17 9 17 9 17 9 17 9 17 9 17 9 | 2 8 16 | W 0 4 | 717 | 10 13 | ° = = | 391 .¥. 9 10 | i-22 |
| 38 27 11 19 21 10 7 -42 -31 -11 -23 - | | 3 10 23 38 | 1 2 | | F OP T | | 0 2 01 | 7 * ~ | -24- | -9 -18 -31 | | -111 | -9 -15 -25 | -16 -24 -41 | -18 | 226 | 27 | 865 M. | .M. 10 12 17 |

*HEADWINDS--COMPUTED FOR A 120-KT AIFSPEED. **A--DENGTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. *INUS SIGN PENGTES 4EADWINDS.

FULL VALENT HEADWINDS AND STANDARD DEVIATION IN KNUTS FOR GREAT CIRCLE AIR POUTES

| | 1 1 1 1 7 | 014 646 550 100 10 | T LENIS -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 - |
|--|-----------|---|---|
| -8 -9 -6 -8 -16 13 -6 -9 -11 -20 25 -10 -17 -20 -34 | • | | PUCKFC PUCKFC 10 2 -6 -16 -18 -27 -21 -20 -27 -36 -27 -36 -27 -36 -27 -36 -27 -36 -27 -36 -36 -36 -36 -36 -36 -36 -36 -36 -39 -36 -39 -36 -39 -30 -30 -30 -30 -30 -30 -30 -30 -30 -30 |
| -1 -1 -2 -2 7 3 5 6 14 13 | | 5 -6 2 6 -18 12 2 -36 27 2 - 36 27 2 0 -21 6 4 -39 | 0 -5 -6 2 -9 -16 -18 12 -20 -32 -36 27 PUCKF4 27 5 -1 -2 -8 10 2 0 -21 19 6 4 -39 |
| 2 0 -2 0 10 + 6 7 22 10 14 16 | | -2 -8 0 -21 4 -39 | 80CKF4 -2 -8 10 2 0 -21 19 6 4 -39 5 11 -3 -6 |
| -7 -3 -5 -6 -13 -16 -2 -8 -12 -21 -31 -5 -19 -23 -38 | 1 4 4 | -3 | SILL 5 -1 -3 -6 |
| 6 -6 -6 -7 -14 7 -4 -9 -13 -23 1 -8 -19 -22 -39 | 1 | 7 - 38 | -21 |
| 4 -1 -4 -4 -12 4 -1 -8 -11 -20 9 -4 -18 -20 -37 | 1 - 7 | -7 -1 -19 - | 7 -5 1 -19 1 -36 |
| 7 -8 -7 -8 -15 3 -8 -11 -13 -21 5 -14 -20 -23 -36 | 13 | -1 1 -19 - 3 -35 - | -9 -19 -35 |
| 3 -4 -4 -4 - 6 2 5 5 5 - 6 5 13 11 | 7 2 | -2 -2 -16 10 -33 20 1 | -2 - 10 50 1 |
| 3 0 -2 -2 -2 1 0 -5 -8 -1 7 0 -15 -18 -3 | 1 - 2 | -5 -3 - -2 -15 -1 0 -31 -2 | 5 -3 - 2 -15 -1 0 -31 -2 |

*MEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DEWOTES ANNUAL FOUIVALENT HEADWINDS FOR INDICATED PER CENT PELIABILITIES. MINUS SIGN DENUTES HEADWINDS.

D210-10600-1

| EFET CANION AFR | | | | و ا | ^ I D | 3 1 | ENT | I | 0 | ONI | \$\$ | | | | STAN | STANDARD | DEVIATION | TON |
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| | J. A. A. | A 98 | אל של | DIRECT JL OCT | ** 450 | A75 | ABS | NAU | APF | J. U.E. | PETURN | ** A 50 | 475 | A 85 | JAN | | אַר | 200 |
| | | 13 | | HUNTE | AAF | | | | | | | | | | | | | |
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| CANNER AFR | | 10 | | KEY | WEST | | | | | | | | | | | | | |
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**FEDDATAPS--COMMUNE FOR A 120-47 AISSPEED.
5--DENOTES **** FOUT VALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES.
**NUS SIS: PENCIES +*ADMINDS.

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N. H. STANDARD DEVIATION 200 Z. H. R. H. 783 N. MI. 838 N.MI. A. M. ż ż ij 6 01 . 658 453 954 1305 9129 APA 909 6 8 7 12 18 === 907 212 19 447 212 TABLE TO STANDAND DEVIATION IN KNOTS FOR GREAT CIRCLE AIR POUTES 13 005 112 12 61 9 77 02 111 12 -15 A 85 -18 900 -17 -15 -18 -31 11--18 -0 5 -13 -21 -39 100 A 75 -16 -15 -24 -40 -13 -16 -28 -16 0 40 6 9 5 -12 5-0 PETUPN OCT **A50 -10 -8 -14 -24 000 9 8 1 8 7 -17 -10 777 -10 -21 147 -12 -26 2-0--12 -26 11-18 702 - EADWIND 79-917 11--10 7 4 575 707 0 1 3 -15 ADE -18 -32 -18 -10 -19 -31 22 23 4 701 -14 -29 112 4 57-977 00 + -12 -23 722 -12 -28 -45 -18 -18 -35 -195 -4 4) H4 758 Y IV A 497 177 *** 0 50 -11 -11 -13 770 475 174 4 74 777 415 177 ONT THEFE . 4 45 SNETTET 155 712 2 4 4 2 L 6 4 1 4 61 100 11 1 11 100 end and E . 172 11 74 自 -. 25 世間 18 # Fig. • 11.9 0 % () - M 11 4 1 1000 -1 3 5 5 E 1 -1 1 100 m -1 H 1 3000 1 p.

**A--DENOTES ANNUAL EQUIVALENT MESDAINOS FUR INDICATED PER CENT RELIABILITIES. MINUS SICH HENDTES MEDDAINOS. 120-KT ATPSPEED. 4 904 CHINCAND -- SUNTACTOR

M. 5₀ .

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FULLIVALENT HENDMITOS AND STANDARD DEVIATION IN KNOTS FOR SPEAT CIRCLE ATP POUTES

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| fref | 7 47 | p br | 101 | 15, | ** 45.3 | 315 | 285 | JAN | 304 | الايل | DC. | •• 4 50 | 475 | A 85 | JAR | APA | 100 | 120 |
| CAND! AFE | | • | | ent I. | - A + AL | 13 | | | | | | | | | | 7 | 1249 N | Ī |
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| 13000 | - 13 | = | 7- | 9- | • | - 15 | - 18 | - | | • 1 | . < | ^ | - | | | | 1 | |
| 19000 | -31 | -26 | -11 | -15 | -25 | -32 | -36 | 29 | 23 | | 13 | 16 | • • | • | 161 | 12 | 20 | 12 |
| But ". Nice L | | U. | | PATE | CK AFA | | | | | | | | | | | - | 3 | 1 |
| | 'n | • | ` | | | - | - | 9 | f | - | 4 | | - | | 7 | • | 917 | E • |
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| Caran, Oak after | | 10 | | PITTS | AUFGH | | | | | | | | | | | | 45 | 3 |
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| CANNON AFR | | • | | SHAW | AFB | | | | | | | | | | | - | N 131 | = |
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*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--[FURTES ANNUAL FOULVALENT PEADWINDS FOR INDICATED PEP CENT RELIABILITIES. *INUS SIGN DEWLTES HEADWINDS.

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FOUTVALENT MEADWINDS AND STANDARD DEVI ... ION IN KNOTS FOR GREAT CIRCLE AIR FRUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIMSPEED.
**A--DENDIES ANNUAL EQUIVALENT HEADWINDS FOR INFICATED PER CENT RELIABILITIES.
*INUS SIG4 DENDIES HEADWINDS.

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EQUIVALENT HEADMINGS AND STANDAFD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR ROUTES

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FULLIVALENT HEADMINDS AND STANDARD DEVIATION IN KYOTS FOR GREAT CIPCLE AIR FOUTES

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EQUIVALENT MEADWINDS AND STANDAFU DEVIATION IN KNOTS FOL CREAT CIPCLE AIR ROUTES

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EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIP PRUTES

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*HEADWINNS--COMPUTED FOF A 120-KT AIRSPEED.
**A--DENGIFS ANNUAL EQUI VALENT HEADWINDS FOR INDICATED PER CENT FELIABILITIES.
MINUS SIGN DENOTES HEADWINDS.

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*HEADMINDS--COMPUTED FOR A 120-KT AIPSPEED. **A--nfy]TFS ANNUAL FQUIVALENT HEADWINDS FOR INDICATED PER CENT PELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

EQUIVALENT MEADWINDS AND STANDARD DEVIATION IN KNOTS FOR SPEAT CIPCLE ALM AGUTES

| | STAMBARD DEVIATION | JAN APP JUL OCT | | *In*N 955 | | 18 18 10 17 | | 979 Y.MI. | 10 10 7 | 11 11 11 | 16 16 9 15 | | 1338 7. 11. | | 16 16 10 16 | | 815 N.MI. | 11 11 7 10 | 12 12 8 12 | 17 9 16 | | 424 N.HI. | 12 12 8 11 | : | 19 19 10 18 | 100 00 000 | 14.85 N. HI. | | 01 | | 527 4. PI. | 13 12 8 11 | 14 14 | 20 20 11 19 | | 1353 N.MI. | 10 10 v | 01 0 11 | - | | 194 M.MI. | 61 6. | 16 10 14 | 72 | |
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| | | A 85 | | ? | , 0 | • | | | 0 | ~ | ~ | | c | 4 | 01 | | | 7- | 7 | 8 | | , | 7 | → , | 0 | | • | . | n ~ | • | | 0 | ~ | • | | , | o · | * | 9 | | | 71- | <u>.</u> | -21 | |
| | | A 75 | | 0 | • | • • | | | - | m , | ٥ | | - | • | 12 | | | 0 | 4 | 1 | | | 0 | M C | 20 | | - | • • | • 0 | 1 | | 0 | S | 11 | | | ~ | • | 71 | | 9 | | | | |
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| 2 | | 705 | | ^ | S. | • | | • | Λ (| Λ • | ٩ | | ç | CT | 9 | | | • | ٥ | S | | u | Λ, | n a | 0 | | 5 | | ~ | | | • | 60 | 12 | | 4 | 0 0 | D : | 2 | | c | ^ | ' ? | J | |
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| F 7 | 1 | 485 | | -17 | -25 | -43 | | 71 | 01 | -62 | 4 | | -17 | ÷7- | -43 | | : | - (| 97- | -45 | | - | 200 | 9 | ? | | -15 | -25 | 24- | | | 61- | 0 0 1 | 65- | | -17 | -24 | 99- | , | | -10 | -15 | -11 | • | • |
| \ \ \ \ \ \ \ | ĺ | 475 | | -15 | -22 | - 39 | a | | - ١ | 27- | • | Ľ. | -16 | -24 | -40 | | | 2 | + > - | 14- | ی | 4- | 25. | -42 | ! | | -13 | -23 | -39 | | : : | -1: | 17- | 142 | | -15 | -26 | -41 | • | | 80 | 6- | -14 | | ALPS PEED |
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| | | 1d V | - | 6- | - 3 | -30 | 1 | 0 | - 1 3 | -31 | | 10 | 0 | -16 | -28 | - | - | 2 - | , , , | 36 - | 10 | -10 | -20 | -35 | | 10 | 61 | -18 | -35 | - | | ; | | | 10 | | 70 | | | Ţ | 0 | 0 | -5 | | 0 |
| | | JAK | T WC 1S | -12 | -22 | -40 | , | | -23 | 14- | | I MCAS | -13 | 77- | -41 | | | 20- | - 43 | | | -13 | -25 | -43 | | MCAS | -1 | -24 | -45 | 5 | | | 941 | • | 4 V | -12 | -25 | -43 | | I | C | -3 | -5 | | SCOMI |
| HE I SHT | | | ۵ | 2000 | 0006.1 | ္ရသင္း | THEREY PT | 5,000 | 10000 | 10000 | | CHEES V PT | 00 35 | 700.7 | 33361 | La Alaga D | F 200 | 1000 | 1 8 7 0 0 | 3 | CHFRFY PT | 2000 | 1000 | 18000 | | CHEFFY DI | 2003 | 10000 | 1 9 0 0 0 | CAFBD V DT | | 10000 | 18000 | | CHERRY DY | 2009 | 10000 | 13000 | | CHEEFY PT | 2005 | 00001 | 1 9 0 0 0 | | *HEADWINDSCOMPUTED |

**A--DEMOTES ANNUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT PELIABILITIES.

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR ROUTES

| | 1 | | | | | | | | | |
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| - 2 | 85 | -17 -26 -44 | -14 -24 -42 | -19 -29 -48 | -19 | -11 -26 -46 | -17 -28 -46 | -17 -27 -45 | 9 # 0 | -18 |
| L 6 | 5 A | , , , | | ~~3 | T | | | | ഗാത | |
| - | A7 | -15 -23 -40 | - N M | 17.4 | -17 -17 -26 -43 | 1-1-24 | -16 -26 -43 | PS -15 -25 -41 | i j d | -14 -25 -40 |
|) I | **A50 | нопо -8 -14 -25 | HUACHUCA -7 - -14 - -25 - | KNCX 19 -16 -27 | LE AYEN _9 -16 -28 | RUCKEP -7 -13 -23 | SILL -9 -15 -27 | MCLTE 6 -9 -15 -26 | SHIFF O O O | 117CHEL -8 -15 -25 |
| F | DIRECT JL OCT | FORT -5 -8 -21 | FORT -4 | f OF T -6 -9 -24 | FOP T -7 -11 -25 | F CP T -4 -6 -21 | FORT -6 -10 -24 | F06 T -5 -9 -22 | FP 061 | GEN # -5 -22 |
| | otk Jul | 2 K 2 | 1 1 1 12 12 45 | 90 8 | 9-1- | 491 | 91-6 | 497 | 400 | 110 |
| | Pt. J | 6 | _ | 5006 | | 10 -18 -30 | 10 -20 -34 | 000 | 2007 | • |
| | ۷ | 16 -10 -19 -32 | 1 1 2 | 17.5 | 10 -19 -32 | | | -10 -19 -33 | | -17 -13 |
| | JAN | MCAS -13 -24 -43 | MCAS -10 -23 -41 | 4CAS -14 -27 -44 | 4CAS -14 -27 -45 | MCAS -12 -23 -41 | 40 A S -13 -27 -45 | "CAS -13 -26 -44 | 4047 0 0 2 | MCAS -12 -24 -40 |
| | | 10 | 6 | 1 0 | <u>a</u> | ā | 4 | <u>-</u> | <u>.</u> | 4 |
| FF ICHT | FEET | C HFRE Y 5000 1,0000 1,8000 | CHFFF V 5000 10000 14000 | FBE V + CCO 1 CCO 1 CCO 1 CCO 1 CCO 1 CCO 1 CCO CCO | CHERRY 5 CCC 1 3 CC3 1 P CC0 | C HFRE V 5 COC 1 D C C C 1 B C C C | CHEEP V 5000 19000 1900 | CHEERY 5 COO 1 J CCO 1 A COO | 7.4666 Y 5000 13000 18000 | CHTRRY FCCC 1 CCCO 18330 |

* HEADWINDS--COMPUTED FOR A 120-KT AIPSPEED.
**A--OFWOTES ANNUAL FOULVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES.
**INUS SIGN DENCTES HEADWINDS.

FQUIVALENT HEADALNOS AND STANDAED DEVIATION IN KNOTS FOR

| CHERRY PT | | | F | l | | , | - | E L | 2 | 2 | >* | | | | STAN | TANDARD | DEVIATION | TIO |
|------------|------------|----------|------------|------------------|---------|------------|------------|------------|------|------|---------------|------------|----------------|------|------------|----------|--------------|-----|
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**A--PEN:)TES ANNUAL FOULVALENT HEADMINDS FOF INDICATED PER CENT RELIABILITIES. PINUS SIGN PENDIFS 4EADMINDS.

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EQUIVALENT HEADAINDS AND STANDARD DEVIATION IN KNUTS FOR GREAT CIFCLE AIR FOUTES

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*HEADWINDS--COMPUTED FOR A 120-KT ALESPEED. **A--DENOTES ANNUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES. Minus sign denotes meadwinds.

FOULVALENT HEADMINDS AND STANDAFD DEVIATION IN KNOTS FOR GPEAT CIPCLE AIR FOUTES

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*HEADMINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENGTES ANNUAL FULL VALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENGTES HEADMINDS.

FULL VALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIFCLE AIR POUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AFRSPEED. **A--DENJTES ANNUAL EQUIVALENT HFADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

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FULL VALENT HEADHINDS AND STANDAPD DEVIATION IN KNOTS FOR DREAT CIRCLE AIR ROUTES

| HE I GHT | | | | ٥ | V I V | / A L | FNT | I I | C | 0 7 | S. | | | | STAN | TANDSED | DE VIATION | 1 0 I |
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*HEADWINDS--CUMPUTED FOR A 120-KT ATRSPEED. **A--DE.JTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. *INUS SIGN DENOTES HEADWINDS.

FOULVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR POUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DELJTES ANNUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT PELIABILITIES. MINUS SIÓN DENOTES HEADMINDS.

EQUIVALENT HEADWINDS AND STANDAED DEVIATION IN KNOTS FOR SPEAT CIFCLE AIR ROUTES

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**A--DEVOTES ANNUAL SQUIVALENT HEADMINDS FOR INDICATED PER CENT HELIAMILITIES. MINIS SIGN DENDITS HEADMINDS.

FQUIVALENT HFACAINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR FOUTES

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*HEADMINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES ANNUAL FQUIVALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES. *INUS SIGN DENOTES HEADMINDS.

EUULVALENT HEADWINDS AND STANDAPD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR FOUTES

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MINUS SIGN DENOTES HEADMINDS.

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNUTS FUF GREAT CIPCLE ALF ROUTES

| _ | | | | | | | | | | | | | | | | | | |
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| | 21 | 91 | 15 | 18 | 18 | • | - | -37 | -53 | -18 | -25 | - 25 | 9 | -45 | 23 | 23 | = | 2 |
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| | 6- | 9- | † | -1 | 1 | -1- | -10 | • | • | • | • | • | - | -3 | 3.2 | = | | |
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*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED.
**A--DENOTES ANNUAL FOULVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES.
#INUS SIGN DENOTES HEADWINDS.

FULL VALENT HEADAINDS AND STANDARD REVISITION IN CAUTS FOR CARENT CIRCLE AIR GOUTES

| STANDAPD DEVIATION | 120 | | | | 1223 | ; • • = | | ;••= | | :00: |
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e-Farmings--Computer for a 120-KT alespeer.

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•Irus sich beneft alabuimds.

SHEFT 17

FOUTVALENT MEADAINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR LOUTES

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OMERABLYAS--COMPUTED FOR A 120-KT AIRSPEED.

**A-TENDTES ANNUAL FOULVALENT MFADMINDS FOR INDICATED REG CENT WELIABILITIES.

*INUS SIGN DENTES MFADMINDS.

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- JIT VALENT HEADHINDS AND STANDAPH DEVIATION IN SNOTS FOR GREAT CIFCLE AIR POUTES

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OMERDWINDS--CEMPUTED FOR A 120-KT AIRSPEED.

OBA--DFWITES ANNUAL FOULVALENT MEADWINDS FOR INDICATED PER CENT RELIABILITIES.

MINUS SIGN DEWOTES HEADWINDS.

EQUIVALENT HEADAINDS AND STANDARN DEVIATION IN CNUTS FOR GREAT CIRCLE AIR ROUTES

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HEADWAINDS--FORMULED FOR A 120-KT AIRSPEED.
 ANALIA FOR FOUR VALENT HEADWINDS FOR INDICATED DEP CENT HELIABILITIES.
 MINUS SIGN OFNOTES HEADWINDS.

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ECUIVALENT MEADAINDS AND STANDARD DEVIATION IN ANDTS FOR GREAT CHECLE ALP FOUTES

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WHERDMINSS--COMPUTED FOR A 120-KT AIRSPIED.

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HINUS SIGN DENGTES HEADMINDS.

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ELUTVALENT MEADAINDS AND STANDAPD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR POUTES

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OMEADWINNS--CUMPUTED FIRE A 120-KT AIRSPEED. OOA--DENUTES ANNUAL FOULVALENT HFADWINNS FIRE INDICATED PER CENT RELIABILITIES. Winus sign denutes 4Fadwings.

EQUIVALENT MEANWINDS AND STANDAFD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR ROUTES

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FEHFVALFNE HEADMENDS AND STANDARD DRY PATION IN KNUTS FOR GREAT CHACLE ALP POUTES

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ECUIVALENT MEADMINDS AND STANDAND DEVIATION IN ANOTS FOR CPEAT CIPCLE AIR POUTES

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EQITIVALENT HEADMINDS AND STANDARD DEVIATION IN KNUTS FOR GREAT CIPCLE APP FOUTES

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• HEADWINDS--COMPUTED FOR A 120-KT AFFSPEED. •• A.--DENDTES ANNUAL FOULVALENT HEADWINDS FOR INDICATED PER CENT PELIABILITIES. ▼THIS SIGN DENDTES MEADWINDS.

EQUIVALENT HEADMINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE ASS POUTES

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EQUIVALENT HEADAINOS AND STANDAFD DEVIATION IN KNUTS FOR GREAT CIRCLE ATA FOUTES

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THE BUEING VEHTOL COMPANY

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EQUIVALENT MEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR POUTES

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OMEADWINDS--COMPUTED FOR A 120-KT AIRSPEED.

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MINUS SISW DENOTES HEADWINDS.

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FOULTALENT MEADWINDS AND STANDAFD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR ROUTES

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ENDINGENT MEANINGS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIP POUTES

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OCE-DENDIES AND LE FOUT VALENT HEADNINDS FOR INDICATED PER CENT RELIABILITIES.
FINUS SIGN DENDIES HEADNINDS.

THE PRE INC VELTIX COMPANY

FQUIVALENT MEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR FOUTES

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*** -- DENOTES ANNOTE SOUT VALENT HEADAINDS FOR INDICATED PER CENT PELIABILITIES.

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F GUI VALENT ME ADMINDS AND STANDARD DEVIATION IN ANDTS FOR GARAT CIACLE AIR FLUTES

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*MEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--CENGTES ANNUAL FOULVALENT HEADWINDS FOR INDICATED PER CENT BELLARILITIES. #INUES SIGN DENGTES HEADWINDS.

FOUTVALENT HEADHINDS AND STANDARD DEVIATION IN ANDTS FOR CHERE AIR GOUTES

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| HEADWINDS. | NOT | 175 | 0•4 | 007 | *22 | 007 | 777 | 772 | NO- | 727 |
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| \ \ \ | A75 | 777 | 174 | 977 | -13 | 177 | 711 | 7 | 217 | 70- |
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| | DIFFCT JUL ncT • | 0 0 0 | MANDALAY 4 -1 0 | HEDAN 11 15 | NEW DE 122 -22 -25 -25 -25 -25 -25 -25 -25 -25 - | PENANG 0 -3 -2 | 751 PI NG -3 -3 | PUSAR 13 | SAI GUN -1 -1 -2 | SHAWGHAE -3 6 |
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*HEADMINDS--COMPUTED FOR A 120-KT APPSPEED. **A-DENDTES ANNUAL EQUIVALENT MFADMINDS FOR INDICATED PER CENT BELIAMILITIES. MINUS SIGN DENDTES MEADMINDS.

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EQUIVALENT HEADAINDS AND STANDARD DEVIATION IN KNUTS FOR GREAT CIRCLE AIR ROUTES

| STANDAPD DEVIATION | APP AUL OCT | 20 % W. C. | *************************************** | 1210 40-41. | · · · · · · · · · · · · · · · · · · · | | 1629 M. Al. | ***** | 1010 | 851 Ac. Al. |
|--------------------|-------------|--|---|----------------------------------|---------------------------------------|------------------------------------|------------------------|-------------------------|------------------------|-------------------------|
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| | 465 | 757 | 0+0 | *** | 277 | *** | 777 | 0-0 | *** | 707 |
| | 475 | 771 | 177 | *** | 197 | *** | *** | -05 | 117 | 707 |
| | 0.449 | ~ 07 | 772 | 777 | *** | 07- | 77^ | *** | 711 | 440 |
| •\$ 0 | 00.1 | 440 | 222 | 700 | 771 | 717 | 700 | ••• | 111 | |
| ٠ د | 14 | 940 | 790 | 177 | 770 | 77 | 7~2 | • • • • | 117 | *** |
| AUNIN | 404 | -07 | 564 | 000 | *** | ~-• | *** | ••7 | 777 | ~ • ~ |
| A 7 | 4 | 0- | 7077 | ~~~ | -11 | . ~ * & | 711 | 700 | 171 | 7 |
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| | APF | F00N | 62.5 | E e o o | E o no | 2775 | 50-5 | - 44- | | 2797 |
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| 1401 34 | FEET | 31 NAP.5 5000 10000 18000 | 74 NANG 6000 10000 13000 | 346m1N 5000 19000 18000 | 5CC0 10CG0 19CG0 | 046 b 1% 5000 10000 19000 | 3600 10000 14000 | 3600 10000 1 4000 | 5CC0 10CC0 19CC0 | 04251N 5CC0 1CC00 |

FUUIVALENT MEADMINDS AND STANDARD DEVIATION IN KNOTS FOR CHEAT CIPCLE ALP BOUTES

| STANDARD DE VIATION | JAN APP JAN 967 | 1370 4.41. | | 1129 fr. m | | | | 100000000000000000000000000000000000000 | 1920 11.00 | 1022 mm. |
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| | 405 | *** | 717 | *** | 775 | 775 | 177 | 797 | 111 | 119 |
| | 475 | 111 | 777 | | 777 | *** | 797 | *** | 222 | 711 |
| | 06 4 00 | -11 | 777 | 117 | 717 | 771 | 777 | 711 | 700 | 904 |
| \$ | 100 | *** | 171 | 177 | 077 | 077 | • • • • | 777 | 177 | - |
| 0 1 | 4 | ~-5 | 001 | 771 | 117 | 770 | 177 | 111 | | ••• |
| 0 | • | 777 | 70~ | 170 | 777 | 007 | 777 | 777 | 7~+ | 707 |
| - E A U 4 1 N D S. | 87 | TTT | 777 | 110 | 775 | 777 | 777 | 777 | 700 | 771 |
| 7 | 485 | 170 | 771 | 771 | 171 | *** | 777 | 117 | 777 | 750 |
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SPEET 90

EGULVALENT HEAD AND SAND STANDAMD DEVIATION IN ANDTS FOR GREAT CIRCLE ARE POUTES

| STANDAND DEVIATION | JAN APP JAK OCT | 1515 mm. | 1930 | | | | 1305 Ent. | | 1000 CM | |
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| | 485 | 110 | 700 | 777 | *** | 791 | *** | 179 | † Ģ | 7 |
| | 475 | 711 | 7 | 777 | 110 | 777 | 119 | 727 | 772 | ņ |
| | 06 V 00 | 000 | | 777 | 775 | 717 | • 7 † | 117 | 775 | ••• |
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| A R | 100 | 777 | 700 | 717 | 077 | 771 | 111 | 777 | 797 | ••• |
| F N T | 485 | **0 | 112 | 177 | 217 | 717 | 110 | 777 | 777 | 177 |
| 4.6 | 475 | 11- | 577 | 771 | 170 | 777 | 77- | 777 | 420 | 193 |
| V 1 U | A50 | 700 | #GEESBY -2 -5 -5 | EAST | 00+ | 770 | 909E | - | ~44 | 717 |
| J | DIPECT UL OCT | PENANG -1 0 | i i i | PUSAN E | SA 26. | SHAMGHAI 0 1 0 | SINGA 90 | 7A1 PE1 2 3 | 10x vc | VANIE OF |
| | ישר | 940 | 711 | *** | 44. | 44m | 17~ | *** | *** | 711 |
| | 4 90 | 316 | 2075 | £~*0 | £4-v | 2 4 4 4 | 2~~* | 5441 | £~.~ | 5044 |
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| HE I GHT | FFET | 14 VAII 5 C O O 1 0 C O O 1 6 C O O | 0AVAQ 5C00 13000 19000 | 94440 4600 10660 19600 | 344AC 5C00 10C00 | 04 VA 4 C C C C C C C C C C C C C C C C C C C | 34 VAO 5000 1 3000 1 8000 | 5000 10000 19000 | 5000 10000 19000 | 5 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 |

HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. * AFADWINDS FOR INDICATED PER CENT BELIABILITIES. *** A--TRUDTES ANNUAL EQUIVALENT MEADWINDS FOR INDICATED PER CENT BELIABILITIES. *** HINUS SIGN DENOTES 4 EADWINDS.

EQUIVALENT HEADHINDS AND STANDARD DEVIATION IN CHOTS FOR GREAT CIRCLE AIR COUTES

| STANDAND DEVIATION | 244 400 JUL OCT | 7 7 7 7 7 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 | 130 44: | 10 10 10 10 10 10 10 10 10 10 10 10 10 1 | 537 M. M | | | | ************************************** | 1020 1641. |
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| | 405 | 555 | 144 | 144 | 125 | === | •11 | 171 | 170 | 170 |
| | 475 | 775 | 747 | 747 | 777 | ??? | •17 | 777 | 17- | 57- |
| | 05 700 | **; | 775 | 117 | 207 | 115 | 70 | 110 | 0 ~ 0 | 7~~ |
| | 130 | 270 | 077 | 977 | ~-0 | 777 | ~0~ | 212 | *** | 500 |
| C | 41 | 777 | 770 | 170 | ~*0 | 707 | 400 | 17" | *** | 17* |
| 0 6 1 N D Se | 707 | 755 | 175 | -71-7 | • • • • | 7 7 7 | ~07 | 11~ | ~~ | N64 |
| 4 2 4 | 4 | 111 | 7:3 | 777 | • † 9 | ree | +70 | 777 | ~~~ | ~~~ |
| 5 N 1 | 405 | 70- | 705 | ~ 0- | 222 | 770 | 717 | ~79 | 719 | 179 |
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| | 0450 | ~~ <u>*</u> | ~~2 | SELM! | 770 | 7005 | 107 | 5 | 079 | 071 |
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OMEADMINDS--COMPUTED FOR A 120-47 AIRSPEED. OOA--DENJTES ANGUAL FOUT VALFNT MEADWINDS FOO INDICATED PER CENT GELIARILITIES. WINUS SIGN DENJTES AFADWINDS.

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FOULTAL FAT MEADELINGS AND STANDARD DEVIATION IN COUTS FOR GREAT CIPCLE AIR POUTES

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TINUS SIGN DEWOTER HEADELINGS.

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FOULVALENT HEADWINGS AND STANDAGD DEVIATION IN ANDIA GOG CASAT CHES.

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| F E F | JAN | APR | و بر ا | DIRECT JUL DOT | •• 450 | 475 | 485 | JAN | | ا د | 100 | 054. | 27.5 | 465 | 4 | į | ş | 5 |
| 30.VEE 664 5.000 1.3000 1.8000 | -13 | 91- | 777 | F.78 T - 3 - 14 - 26 - 26 - 26 - 26 - 26 - 26 - 26 - 2 | 18504 110 110 110 | 97- 97- | 94- | 123 | 6 9 2 | ~== | -24 | • 51 52 • 52 52 | ~-2 | 0 5 | 222 | 2=: | 2.09 | ;•2: |
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| 4 | -14 | -1.3 -20 -32 | 110 | FD01 -7 -12 -26 | 82- -11 -11 | -16 | -18 | 2% | C7 62 | ~02 | 711 | -52 | ~~2 | ~r0 | 171 | ==== | 0 | ֥== |
| 4 | -13 -27 -46 | -13 -20 -32 | 4- 6-1- | _ | 4017685 -9 -16 -27 | 100 | -13 | 281 | • 22 | = | •07 | -12 | = | 0 • • | =225 | = 222 | * | £*== |
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| ALTERNATION. | | | | 2 | THE PAIR | | | | | | | | | | | | | |

*MEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DF-OTES ANNUAL FQUIVALENT MEADWINDS FOR INDICATED PER CENT MELTABILITIES. MINUS SIGN DENOTES MEADWINDS.

FULLVALENT HEADNINGS AND STANDARY DEVIATION IN CARTS FOR DEBAT CLECLE AT GOUTES

| STANDERS DEVIATION | 348, 480, JUL 9CT | 10 40 40 11 12 12 12 20 | 1667 Valle 10 10 0 | 657 % MI. | 200 4. ml. 12 12 0 11 14 0 13 26 20 11 | 13 12 00 11 16 11 16 13 12 00 13 15 15 15 15 15 15 15 15 15 15 15 15 15 | 000 01 01 01 01 01 01 01 01 01 01 01 01 | 10 10 7 91 10 12 11 12 11 10 10 10 10 10 10 10 10 10 10 10 10 | 1952 Vall. | 12 12 8 10 12 13 15 16 12 16 16 16 16 16 16 16 16 16 16 16 16 16 |
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| \$ | 9) 1 3 - | £ 7.7 | ~ ~ ~ ~ | " | 44.4 | 9 6 8 | 2 4 2 | ~ + 0 | 6 7 7 7 | 111 |
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| F 4 | 485 | -21 -32 -51 | -15 | -12 -16 -25 | -15 -23 -39 | -19 | -15 -21 -36 | -12 -16 -26 | 125 | 119 |
| - 4 | 475 | -19 -29 -47 | 17. | 174 | -13 -20 -35 | -17 | -13 -19 -32 | -11 | -14 -23 -33 | -17 -27 -45 |
| 0 U I V | ** 450 | MITCHEL -13 -19 -31 | 4F B - 58 + 17 + 17 + 24 | STEA9 A | FF AAF -c -11 | SVI LLE -9 -16 -29 | SONVILL -6 -10 -19 | nEST _5 | 64 AF 5 -13 -13 -23 | LF PUCK -12 -17 |
| | PECT OCT | 26.11 | +111 -7 -14 | H 04 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - | 100 P | 10NT -10 -27 | 13CK | \$ 7 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | 1.45 -15 -29 | -12 -12 -27 |
| | 10 131 | 117 | -1-5 -1-2 -2-0 | 777 | E 0 8 | -10 | 1.5 | N M 4 | -13 | 904 |
| · II | 1 0 t | 120 | 1 4 6 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | -5 -5 -17 | 114 | 10 -20 -32 | 123 | -5 -4 -13 | 15 -14 -26 | 123 123 133 |
| | NAL | 129 | -111 -24 -42 | 9 6 7 7 | -19 -18 | -14 -28 -47 | -9 -15 -32 | -10 -10 | -1.7 -24 -38 | -15 |
| طو ال∵ن | FFET | 70VFF 2FP 5CC0 10C00 18C00 | 00 VEC Att CC0 13000 13000 | 00 VF6 AFE | 30VFF AFE 5000 10000 13000 | 5000 10000 18000 | 90VE AFR 5000 10000 18000 | 00.VEE 3FB 5000 10000 1 PCC0 | n V St. Af a 5000 10000 19000 19000 | 3000 13000 18000 |

**&ADMINOS-*COMPUTED FOR A 120-KT AIRSPEED. **AL-CENTING FOR INDICATED PER CENTIMELIABILITIES. MILUS SION PRODIES MEADMINOS.

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EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE ATA GOUTES

| STANDARD DEVIATION | JAN 400 JUL OCT | | 57. "M". 57. "M". 51. 51. 51. 51. 51. 51. 51. 51. 51. 51 | 1003 4-41. | 736 Mart. 12 12 0 10 13 14 0 13 | 1702 % M. M. | 20 12 12 05 11 12 05 12 12 12 12 12 12 12 12 12 12 12 12 12 | 1239 %.ML. 11 11 0 10 11 12 9 11 11 12 11 11 | 1872 1.41. | 11 11 7 10 12 12 9 11 17 17 10 |
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| H H | _ | 312 | -20 -37 | 17 | 22 | 13 | 13 25 36 | 22.4 | 21 36 | 35 |
| ENTHEADHI | 485 | -22 -35 -55 | 170 | -14 -24 -42 | -19 -31 -49 | -12 -18 -32 | -20 | -18 | -14 -24 -42 | -17 -25 -43 |
| A . | 475 | -20 -31 -53 | 100 | -13 -22 -39 | -17 -28 -45 | -10 -16 -29 | -18 -28 -45 | -17 -26 -41 | -13 -22 -39 | -15 -23 -39 |
| A 1 0 | ** A50 | AR CUPNE -11 -20 | NG AFP 5 | AFB -8 -15 -26 | -10 -17 -29 | 0 CITY -5 -9 -18 | -51 PAUL -10 -19 -31 | 4F8 -13 -18 -29 | S AFB -8 -15 | OPLEANS -8 -14 -24 |
| | DIRECT UL DOT | 100 AP -9 -13 -31 | LCFIN 133 143 | LUKE -6 -111 -24 | HEMPH-7 -11 -27 | NF X IC -2 -4 -15 | PI NN- | 41 N 14 -9 -15 -23 | NELLI -6 -12 -25 | NEH C |
| 1 1 | 10 101 | -14 | 0 8 7 | 1.9 | -10 -14 | - m - 2 | -15 -22 | -12 -22 | -10 | 177 |
| | A PE | 10 -12 -23 -35 | 4 4 11 | 13.2 | -11 -21 -32 | 10 -1 -12 -22 | 10 -9 -18 -30 | 10 -8 -16 -27 | 10 -3 -16 | 10 -18 -28 |
| | וי גע | -16 -32 -52 | 13 | -10 -23 -42 | -15 -29 -44 | -18 -18 | -14 -27 -45 | 113 | -10 -23 -42 | -12 -23 -42 |
| 4Н91∃ | 73.54 | 5000 10000 18000 | 30 VEF AFB 5000 10000 19000 | DOVE AFR 5000 10000 18000 | 70VFH AFR 5CG3 1CCC0 1ACCO | DOVEF AFA 5000 1,0000 1,9000 |)CVFF AFH 5CG0 10CC0 18COn | DOVE AFR 5000 10000 18000 | 5000 10000 18000 | DOVEE AF9 5000 10000 18000 |

*HEADWINDS--COMPUTED FOF A 120-KT AIRSPEED. **A--DENOTES ANNUAL EQUIVALENT HFADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HFADWINDS.

EDULVALENT HEALTH NDS AND STANDARD DEVIATION IN SWITS FOR GREAT CIRCLE ALE SOUTES

| STENITHD DEVIATION | | 205 % PI: 15 14 13 12 17 17 11 15 23 23 14 22 | 701 % MI. | 234 % MI. 15 14 10 12 16 16 11 15 25 23 13 23 | 1403 %.M.: 11 10 0 10 11 11 7 10 14 15 10 15 | 679 %M. 13 12 0 11 14 14 10 13 2C 2C 12 2O | 393 W.MI. 16 16 9 12 16 16 11 16 23 22 13 22 | 392 % 41: 15 12 9 12 15 15 10 14 21 21 12 20 | 227 %H1. 15 15 10 12 17 17 11 15 24 24 14 23 | 15 16 11 16 11 16 15 25 13 21 |
|--------------------|-----------------|--|-------------------------------------|--|---|---|---|---|---|--|
| | 4.65 | 404 | 111 | 0.60 | ••= | 0 • 2 | 78~ | 170 | 200 | 7-7 |
| | 275 | 777 | 277 | | | 285 | 0.0 | 70~ | 47.7 | 046 |
| | 0<4.0 | 51 | m 4 4 | 512 | ~ £ 2 | 21.4 | 2 P | 224 | -15 | 19 |
| | 6 c T U2 N | M V 00 | ~~~ | * = 2 | 0 3 N | 272 | 102 | * 0 0 | -12 | 330 |
| 2 | 100 | ~ = = | mm., | r 4 3 | 9 1 2 | ~ # 4 | 13 | ~ e t | 2 0 1 2 | 0 7 2 |
| c | 4 | • • <u>•</u> | 4 ~ 0 | 282 | 213 | 07 | 626 | 4 2 3 | -17 | 8 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 |
| ¥ 3 +: | 78.6 | ~55 | 4 4 5 | 125 | 312 | 224 | 24.2 | F 4 9 | -12 | 10 70 70 70 70 |
| 1 × 1 | ⋖ | -16 -27 -42 | -13 | -22 -34 -54 | -17 | -21 -32 -52 | -21 -32 -50 | -14 -25 -43 | 411 | -19 -30 |
| 7 4 | ~ | 15 -16 -24 -37 | -12 -16 -27 | -20 | -15 -25 -39 | 100 | AF6 -18 -29 -40 | -14 -23 -33 | 4 ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° | -17 |
|) | 0 cg | 254 F5L -13 -22 | 1CK AFF | 54U65H -11 -19 -32 | 44 -17 -23 | -11 -14 -19 | 106F -10 -18 -30 | Ař8 -13 -22 | : VEE AF 5 | 5 41 TH -9 -17 -27 |
| ı,ı | nirect n oct | 2 5 8 8 7 7 8 8 7 8 8 7 8 8 8 8 8 8 8 8 8 | PATP 1-2 1-1-4 | 9 | FFGIN -9 -15 -27 | -13 -33 | SELF+ -8 -12 -27 | SH 3. | 15 ST | #UPT - ? - 2 - 2 - 2 - 2 - 4 |
| | יור זיינ | 170 | 246 | -14 -20 | -1 ÷ | 113 | -14 -20 | W 1 1 1 | ٠ ٢ ۽ ټ | 61- |
| | 3 d 41 | 1.8 1.25 | 10 -11 -15 | 70 -12 -22 -34 | 10 -7 -15 -26 | T0 -11 -22 -33 | 10 -19 -19 -32 | 74 -16 -24 | 10 5 112 112 | 12.2 12.3 12.3 |
| | ⊱ در | -11 -21 -34 | -12 | -15 -31 -50 | -12 -24 -38 | - 16 - 30 - 50 | -14 -28 -44 | 120 | 8 4 6 | -12 |
| TH21 34 | 144 FF E T | 07VE4 AF8 5CC0 13CO0 18CO0 | 00VEC AFP 5CC0 10C00 18C00 | 79VEA AFF 5000 1900 1300 | 77 VEC AFE 5000 10000 13000 | 00VEF AF5 5CC0 10C00 18COO | 5000 10000 18000 | 001VFF 2FF FCC0 10000 12000 | 34VFE 164 3636 17900 19600 | 000 PER DER DE PER DE P |

**AA--CE TES ANNUAL FOR A 120-KT AIRSPER.
**A--CE TES ANNUAL FORTVALENT HEADWINDS FOR INFICATED PER CENT RELIARILITIES.
*!THUS SIGN DENDIES HEADWINDS.

SHEFT 136

FOUTVALENT HEADAINDS 410 STANDARD DEVIATION IN KILL'S FOR GREAT CIPCLE AIR BOUTES

| STANDARD DEVIATION | JAN 404 JUL OCT | 1992 4-41. | 1037 m.ml. | 12 10 3 10 12 15 12 20 17 16 17 | 13 11 10 11 16 14 12 16 22 16 17 19 | 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 1993 4.MI. | 1001 M. MI. 14 10 9 10 14 12 11 12 19 16 15 | 525 4.41. 15 13 11 13 16 15 13 15 23 20 19 20 | 160 mmi. 10 0 7 0 12 10 0 10 |
|--------------------|-----------------|-------------------------------------|-----------------------------------|-----------------------------------|---|--|-----------------------------------|--|--|------------------------------------|
| | 484 | ~~• | 611 | -12 | 125 | 12.2 | -112 | 11. | 323 | 577 |
| | A 75 | 0 % 0 | 11- | | 21- | 152 | 221 | -17 | -25 | -13 |
| | 50 | *== | 929 | 175 | 2.4.5 | -12 | 171 | 100 | 700 | 77- |
| \$ | 130 | ~== | 4717 | m 6; m | 105 | -12 | 7 7 0 | -5 -10 -17 | -112 | -12 |
| U N | JUL | 7 = 2 | 113 | ? ? = | 7 7 5 | 777 | ~~ | 277 | 779 | 7 6 9 |
| B 0 | 404 | ~ ~ ~ | 577 | | 7 9 2 | 510 | 111 | 195 | 177 | 705 |
| HFA | J &N | 9 12 | -13 -23 | 011 | 1-6- | -15 -16 -17 | 404 | -11 | -12 | -12 |
| ENT | 485 | -14 -21 -32 | 702 | 4.40.40 | 344 | 7 O F | 997 | 177 | 945 | 70 * |
| 1 L | 475 | -13 -19 -30 | 7.74 | 177 | £ 177 | 0 ~ 0 | 479 | 611 | 770 | 0 ~ 4 |
| ^ 1 0 | ** A50 | LOWKNIFF -7 -13 -21 | ONTON 4 | e 7 0 0 | 1.31985 AF 3 5 1.3 | LE #1S | 7 AFB | U 3 | 7 0 E | N AFB 5 |
| 9 | FC T | YELLO -9 -13 -21 | EDMON 5 1.1 1.6 | E1FLS 3 7 13 | ELVER. 3 3 | 608 T 5 10 10 118 | HICKA 6 4 | JUNEA 4 8 8 14 | 4100X | LAP SUN 5 9 18 |
| | JAL JC | -12 -18 | *~= | 1-0 | 7 2 0 1 | 1 4 8 | N # 0 | 2 9 1 | 8 8 8 | 2 B 4 |
| | A PF | 10 -10 -19 | 10 3 11 | E m + n | F * * * * | 40 8 8 | 10 0 | E # 4 C | E , 1 | 13 13 |
| | % &€ | -17 -27 | НАЕВЭЯ 5 11 19 | насьот 1- 4 | 446.034.0 0 6 13 | насвоэ 8 13 21 | HAFRUP 15 14 15 | 47.637H 8 8 | 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 | НАБВОБ 7 12 21 |
| TH21 au | IN | 0-1VEF AF 5000 10000 18000 | ритсн н 5000 10000 19000 | 907CH H 5000 10000 19000 | 7076 H 5000 13000 18000 | 501СН 5000 13000 18000 | БИТСН Н 5000 10000 18000 | 307CH H 5CCC 1CCCO 13CCO | 5000 1000 13000 | 19CC0 18C00 18C00 |

*HEADMINDS--COMPUTED FOR A 120-KT AIFSPEED. **A--DENDTES ANNUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENDTES HEADMINDS.

FLUIVALENT HEADHINGS AND STANDARD DEVIATION IN ANDTS FOR GERAL CIRCLE ALP BOUTES

| STANDARD DEVIATION | P JUL 0C1 | 1614 M. M. 10 9 10 11 1 10 | 1096 Mani. | | 1785 M.MI. 9 7 9 10 9 10 | 1673 W.MI. | 1013 M.MI. 7 9 7 9 13 9 13 | 1207 N.MI. | 1646 M. H. | 100 100 100 100 100 100 100 100 100 100 |
|--------------------|--------------|------------------------------------|--|--|---|---|---------------------------------------|------------------------------------|---|---|
| TANDAR | JAN A! | 223 | === | 212 | 122 | - 12 | ••• | , 12 | 001 | 711 |
| Ļ | _ | | | | | | | | | |
| | 2.85 | 771 | 11-12- | 177 | -15 | 77. | -13 | 977 | -10 | -14 |
| | 214 | 071 | 41- | 70- | 112 | -10 | 777 | 400 | \$1-12 57-75 | -12 |
| | 06 A •• | 994 | F 9 0 1 | 904 | -1 21- 21- | 191- | -12 -20 | 000 | | -13 |
| | LC.L | *0- | -10 | E 7 70 | -12 | 96.9 | -6 -12 -21 | 422 | 4- 1- 1- | -6 -14 -23 |
| 2 | 3 | ~> m | 977 | 624 | 767 | F 9 7 | 77 51 | 14~ | 77 | 797 |
| A U . I N D | APE | 4~~ | 2 4 6 | 7 13 | -1-1 -1-1 | -12 | 101 | 0 m v | 1-1-21 | 661 |
| I U | | £ 5 0 | -3 -10 | 5112 | -10 -14 -27 | -18 | -8 -17 -29 | 092 | 4 1 - 1 4 - 2 | -19 -27 |
| F 7 T | 485 | -18 -20 -27 | - 5- | -20 -26 -86 | 10 m | 670 | , ~ * | -15 -15 | 211 | ٠ |
| 4 | | -14 -18 -25 | 224 | -17 -23 -32 | 0 7 9 | 707 | 700 | -1 -13 -22 | AFB -4 | AFB -3 |
| 2 2 | ** A5 0 | Y ISLAND -9 - -10 - | DE HAV | 4 - 13 - 14 - 14 - 14 - 14 - 14 - 14 - 1 | 4 0 0 0 0 | HKNIFE 3 6 11 | 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | 0% AFH | RGTON A | MORTH A |
| | DI#ECT | MI3.45 4- 4- 11- | Pauge 1 5 | SHE WY -10 -16 -22 | YAK I M 6 9 18 | VELLO 5 9 9 13 | FGLIN 5 10 15 | +171° -4 -1 | FLLIN 3 8 12 | FLLSh 5 12 13 |
| | JUL JUL | -11 | 8-1- | 11- | 41 | 9 | 2 6 10 | 1 5 4 | 104 | 101 |
| | A PQ | -3 -11 | 4 4 9 | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 40 3 8 13 | 40 8 8 10 | 70 9 9 | 150 | 0 o | 13 9 |
| | 2 4 € | вон -12 -14 -23 | POP -2 | -14 -14 -20 | вОР В 113 21 | 905 1 | 12 | 110011 | # C 4 | 6 117 22 |
| HE ICHT | IN. FFFT | 7UTCH ~1FB3F 5CCU 10CCU - | ЭСТСН НАЯРОР 5ССО 1СССО 18СОО | 000CH HARBIR FCCO LOCCO 15CCO | 7UTCH -446RQP 5C00 10CCC 18CCO | БОТСН НАЕВОБ 5ССС 13СОС 13СОО | EDMC11(1N 5CCO 1CCCO 14COO | EDWPWTPV 5000 10000 18000 | FEWER TIN 5000 10000 18000 | EUMONTON 5000 10000 18000 |

*HEADMINDS--COMPUTED FOR A 120-KT AIFSPEED. **A--DENOTES ANNUAL EDUIVALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN OFNOTES HEADMINDS.

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EQUIVALENT HEADWINGS AND STANDAFD DEVIATION IN KNUTS FOG GFEAT CIFCLE AIF FOUTES

| | | | | u | > - O | ALF | _ | u. | 3 | 0 2 | • | | | | 57.4% | STANDARD DEVIATION | DEVIC | 100 |
|--|----------------|---------------------|-------------|---|--------------------------|----------------------|-----------|----------------------|------------------|------------------|-------------------|-------------------|---|----------------------|-------------|--------------------|-----------------------|-----------|
| TN FEET | 187 | A PC | אחר אחר | DIBECT L CCT | ** 45 J | 2 | ∢ | | 3 | <u>بر</u> ر | L . | **** | A 75 | A 85 | ۱۸۸ | 4 | ă, | 904 |
| F) 40% 714 5000 10000 18000 | -10 | 40 10 10 | C 10 B | FL# 51-16-16-16-16-16-16-16-16-16-16-16-16-16 | ENDOKE AF | -14 -16 -26 | -8 -15 | 0 5 7 | 048 | 046 | 8 6 12 | 0 % 0 | \$ 0 T | 971 | *19 | - 004 | 1240 M. | |
| EDMONTON 5000 10000 18000 | 1 1 N | 10 0 10 10 | 07- | EL 12 | T(,A) PCA | AS -3 -15 -15 | 67 | 400 | ~07 | 0 / 4 | 2 1 2 | -0- | 79-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7- | -12 | 1118 | ~~• | 1207 N. | |
| ED #07 V TCN 5000 1.000 | 2 1 1 1 1 1 1 | 10 7 11 | 040 | ENGL! | AND AF8 | £ = E | 40- | -16 -16 -26 | 5-6-7- | -1-5-11- | -111 | -10 | -17 | -12 -19 -31 | P 2 2 | -007 | 1613 m | |
| FOMONTO! 5 COO 1 DCCO 1 8 COO | 4 15 21 | 10 10 15 | 3 | F04T 6 11 18 | AENNING 5 10 16 | 01- | | 0E - 61 - 01 - | -11 -20 | £ 1 4 1 1 | -13 -23 | -13 -21 | -13 -20 -31 | - 14 - 21 - 34 | 204 | 905 | 1757 N 7 7 9 | |
| FPMONTON 5 CCO 1 3 COO 1 8 COO | -3 | 13 2 2 2 | E- 01 | £067 | ALISS -3 2 2 | 774 | p 4 80 | 2 -9 -17 | ~ ~ ~ ~ | m 0 7 | 77. | ~ 4 6 | -2 -10 -20 | -3 | 200 | ~ 6 4 | 1342 n | E |
| EDWONTON 5000 10000 18000 | 10 19 26 | 5 11 13 | 111 | F08T 12 12 20 | 98 AGG/P | P9PE 5 7 10 | 0 \$ \$ | -11 -21 -34 | -é -13 -23 | 7 7 | -14 -25 | -8 -15 -24 | -14 -21 -34 | -15 -23 -37 | 004 | -002 | 1822 N | E S O O E |
| FD MON TON 5 CC0 1 J CC0 1 8 CC0 | 24 | 4 10 18 | 404 | F.0F.T 1 13 20 | CAMPPEL 5 12 17 | ر د به د | -29 | -11 -20 -31 | -15 -20 | -10 -10 | -14 -25 | -14 -14 -23 | -14 -21 -33 | -15 -23 -36 | 202 | 222 | 482 _N | |
| EDMONTON, 5C00 13C00 18C00 | C 11 | € c v o | 4 4 4 | FUPT 0 7 11 | CAFSUN 0 6 8 | 407 | 771 | -13 -22 | 9-1- | 1.5 | 0-6- | 0 8- | 97- | -1 -16 -28 | 52 2 | 000 | 963 N 1 3 | E |
| EPMONTON 5COO 1 0COO 1 8COO | 10 23 29 | 10 5 12 19 | 5 1 1 8 1 8 | F0FT 8 14 21 | EUSTIS 6 14 21 | ° 21 | 0 • 0 | -12 -22 -35 | -6 -13 -23 | -5 -13 -20 | -15 -15 -26 | -8 -16 -26 | -15 -23 -36 | -16 -24 -38 | 1,90 | 1664 | 1770 M | |

*HEADMINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES ANNUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SISTA DENOTES HEADMINDS.

FOULVALENT HEADAINDS AND STANDAPU DEVILATION IN KINTS FOR GREAT CIFCLE AIR FOUTES

| TWA APE JULICATION ATS ABS JAM APE JUL OCT 0005 ATS ABS JAM APE JAM APE JUL OCT 0005 ATS ABS JAM APE JA | HE 1GHT | | | | | > _ n o | ب 4 | - 2 | ₽ W | 3 | 2 | * | | | | STAR | STANDARD DEVIATION | JE V I A | 5= |
|--|--------------|----------|------|------------|---------|------------|--------|------------|-----------------|-----|------|---------------|-------|-----|------|----------|---|----------|-----|
| 12 12 13 14 15 15 15 15 15 15 15 | IN | JAN | A PC | JUL JUL | | ** A2 | A75 | 80 | JAN | APt | 1 1 | | 4 * A | | 60 | JAR | | אר | OCT |
| 1 | FOMONTON | | 10 | | FOOT | OO OH | | | | | | | | | | | 2 | N 513 | H |
| 10 5 2 7 5 6 1 1 1 1 1 1 1 1 1 | 2000 | 7 | ່ດ | - | 7 | 0 | -5 | 9- | * | - | - | -3 | -2 | 9 | 6- | * | 6 | - | |
| 14 | 10000 | 01 | S | 7 | _ | 8 | 0 | 7 | • | - | | | -8 | ~ | - 16 | 5 | • | ~ | • |
| 132 | 18000 | 14 | € | 4 | 12 | 6 0 | 0 | 7 | ~ | 71- | | | - | 2 | -28 | 15 | * | • | 13 |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | EDWONTON | | 13 | | FISET | HU ACHU | • | | | | | | | | | | ======================================= | Z | |
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| 3 0 -4 2 0 -9 -11 -13 -6 1 -8 -6 -17 -19 16 15 10 1472 N. 10 5 1 10 13 12 5 4 -20 -12 -14 -15 | 10000 | 4 | ~ | ī | ? | 0 | * | ş | | | ၁ | 7 | | 8- | - | S | • | 1 | • |
| 17 | 00081 | m | 0 | 4- | 7 | ၀ | 9 | -11 | | 9 | - | 9 | | - | - | 91 | 12 | 0 | 1 |
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| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | 5000 | | 'n | ď | ~ | 3 | f 1 | 7 | -11 | 9 | | 8 | | - | - | 10 | • | . 60 | • |
| 17 15 17 15 18 19 19 19 19 19 19 19 | 13013 | υ •• | 11 | 1.0 | 13 | | ۱, | 4 | | -12 | _ | $\overline{}$ | ~ | -22 | -24 | 01 | | 60 | 2 |
| 17 18 18 18 18 18 18 18 | 18000 | 72 | 17 | - | 71 | 1 | CI | œ | | -21 | | ~ | N | -34 | -37 | 2 | | 01 | * |
| 1 | FIN WON, TUN | | [ː | | FORT | w | OFTH | | | | | | | | | | = | 7 | Ī |
| 17 9 8 13 11 4 3 -19 -10 -9 -14 -13 -21 -22 15 10 9 | 5000 | ជ | 4 | 7 | 1 | | 7 | -3 | - 10 | ď | -2 | - 7 | 9 | - | -15 | | | • | |
| TOW TO FORT LEWIS 13 -15 -16 -16 -17 -13 -15 -17 -18 -18 -17 -18 -19 -19 -19 -19 -19 -19 -19 -19 -19 -19 | 10001 | 17 | c | 83 | 13 | 11 | 4 | 6 1 | -19 | - | 6- | -14 | ~ | 2 | -22 | | 01 | • | |
| To To Fight Lewis To Fight Mouthers To Fight Mou | 18000 | 5.3 | 13 | 12 | 10 | 91 | ٥ | 4 | | ~ | - 15 | 57 - | ~ | m | -35 | | 15 | = | 15 |
| To Fight | EPMONTON | | 10 | | FORT | LEWIS | | | | | | | | | | | | 2 1 N | 1 |
| To Figs Fi | 2000 | 01- | -5 | -7 | - | 9 | -13 | -15 | 10 | 2 | 2 | 9 | 5 | | | 1 | | • | 7 |
| -17 -13 -12 -18 -15 -28 -31 9 9 10 12 10 -2 -5 5 6 19 15 -4 -3 0 -3 -4 -11 -13 1 2 3 5 2 -3 -4 9 10 15 -4 -3 -3 -6 -4 -11 -13 1 2 3 5 2 -3 -5 11 10 10 10 10 10 10 10 10 10 10 10 10 | 10000 | -12 | 0 | -5 | -13 | -10 | -18 | -20 | 6 | _ | S | 12 | 60 | 0 | 7 | * | = | | 11 |
| To Fight CFD | 13000 | -17 | -13 | -12 | -18 | -12 | -28 | -31 | 6 | 0 | 2 | 12 | 01 | | | 20 | 13 | | 6 |
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| 10 | 2000 | 1.5 | -3 | 0 | -3 | | 6 | 01- | 2 | • | 2 | • | 7 | | * | ٠ | 80 | | • |
| To Fight pucker | 10000 | 1 | £. | -3 | q | 7 | -11 | -13 | _ | 7 | m | 5 | 7 | | -5 | 71 | | • | 9 |
| 15 10 FOBT PUCKER 1806 N. | 18000 | ď. | -1 | 6 | 9 | 4 | 61- | -22 | -5 | -1 | 9 | 7 | 7 | | 1- | 97 | | 12 | 91 |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | FINAN, TON | | 10 | | F 08 T | PUCKER | | | | | | | | | | | _ = | Z | H |
| 15 9 7 10 10 4 2 -18 -11 -7 -12 -19 -20 9 9 7 7 20 14 11 17 15 6 4 -29 -20 -13 -22 -21 -30 -33 14 13 9 7 1302 N. 20 14 11 17 15 6 4 -29 -20 -13 -22 -21 -30 -33 14 13 9 7 1 1 0 0 -15 -16 -16 10 9 7 1 1 0 0 -15 -10 -10 -16 -16 10 9 7 7 1 1 0 0 -25 -15 -9 -19 -17 -27 -30 16 15 10 10 9 7 7 10 10 9 10 10 10 9 10 10 10 9 10 10 10 9 10 10 10 9 10 10 10 9 10 10 10 9 10 10 10 9 10 10 10 9 10 10 10 9 10 10 10 9 10 9 | 2000 | _ | .+ | 7 | 9 | • | | -5 | 6 | -5 | -3 | 9- | | -12 | -13 | ٥ | • | ~ | • |
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| 11 6 3 2 6 0 -1 -14 -7 -4 -9 -9 -15 -17 1C 9 15 8 5 12 9 0 -1 -24 -14 -9 -18 -16 -26 -29 15 14 1 | 2000 | m | - | | • | - | • | -5 | 4 | 7 | 0 | | | 1 | | 3 | • | _ | • |
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| | 1 A C C O | 15 | 60 | 2 | 12 | 6 | ၁ | 7 | -24 | +1- | 5 | | _ | -26 | ~ | 15 | * | 01 | 14 |

*HEADWINDS--COMPUTED FOF A 120-KT AIRSPFFD. **A--PERDTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT PELIABILITIES. *INUS SIGN DENOTES HEADWINDS.

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THE BUEING VEHTOL COMPANY

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*HEADWINDS--COMPUTED FOR A 120-KT ATRSPEED. **A--DENUTES ANNUAL FULLVALENT HEADWINDS FOR INDICATED PER CENT FELTABILITIES. MINUS SIGN DENUTES HEADWINDS.

EQUIVALENT HEADMINDS AND STANDAED DEVIATION IN KNUTS FOR GREAT CIPCLE AIR POUTES

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MINUS SIGN DENDTES HEADMINDS.

SHEET 112

FOULVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GPEAT CIRCLE ALP POUTES

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FOULVALENT MEADALINDS AND STANDARD DRV LATION, IN KNOTS FOR SPEAT CIPCLE AIR FOUTES

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| 0 3 | 250 | SHAM 7 12 19 | THULE 3 | NESTO 9 15 22 | NUF TS 9 16 23 | YAK I H -6 -11 -15 | YELLO -2 -6 -8 | ELLIN -4 -17 | ELL S# -5 -10 -20 | EL 10 |
| | אור מ | 401 | 200 | 6 14 21 | 20 | 7 7 7 | 041 | 777 | -2 -11 | 7 |
| l | AOR | 5 2 11 | 10 1 | 5 11 19 | 10 11 18 | 10 -5 -6 -10 | 1001 | TC -7 -15 -30 | 10 -11 -22 | 24 |
| | JAN | 118 | 0 1 4 | C 60 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 | 10 20 29 | -10 -9 | 1 8 0 | -10 -20 -37 | -17 | (r.) |
| | FEET | EDMONTON 5000 1 0000 1 8000 | EP MONTON 5000 10000 18000 | FDMONTFN 5000 10000 18000 | 5000 13000 18000 | EDMONTON 5000 10000 18000 | ED WONTON 5C00 10C00 18C00 | EGLIN AFA 5CC0 13C00 18C0C | FGL IN AFE 5000 10000 18000 | FGLIN AFB |

*HEADWINDS--COMPUTED FOR A 120-KT AIPSPEFD. **A--DENOTES ANNUAL FOULVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. Minus sign denotes Headwinds.

EGUIVALENT MEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR SOUTES

| | STANDARD DEVIATION | JAN APP JUL OCT | 315 N-M1. 12 12 6 11 13 13 9 12 16 16 10 17 | 10 10 7 9 10 10 7 9 10 10 7 10 16 15 8 14 | 473 No.WI. 12 11 8 11 13 13 9 12 15 18 10 17 | 374 Mart. 13 13 9 11 14 14 9 13 20 19 11 16 | 11 11 7 9 11 11 11 0 11 11 11 0 11 | 671 %ML. 12 11 0 10 13 13 0 12 16 10 17 | 571 N. MI. 12 11 6 10 12 12 6 11 17 17 9 16 | 1224 N.PI. 9 9 6 6 10 9 7 9 15 14 8 13 | 13 12 6 11 91 91 91 91 |
|---|--------------------|-----------------|--|--|---|--|------------------------------------|--|--|---|-------------------------------|
| | | 5 435 | 7 H O | E 0 1 | 14 -16 22 -24 37 -41 | 6 - 11 - 4 | *0° | 4 -16 2 -24 -42 | °00 | ~ · · · | 117 |
| | | ***** | 400 | 403 | -7 -1 -1 -12 -2 -2 -3 -3 | 717 | · • • • | -7 -14 -12 -22 -22 -38 | v e a | ~ = = | 77 |
| | 0 | UL CCT | 7 | 2000 | 15 - 19 - 19 - 19 | -100 | 2 4 8 8 14 8 17 | 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - | *~ 3 | 7 4 5 | 07 |
| | 7 | APP JU | 7 14 28 | 5 14 28 | 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | 797 | * 15 23 | - 1- - 1- | · *2 *2 ** | 13 | 77 |
| | ۷ ۱ | 4 | # C * | 7 5 2 | -11 -21 -39 | -2 -3 -10 | - F1 6 | -11 | 6 6 8 | 358 | 17 |
| | 2 | 485 | -15 -23 -62 | -13 -21 -39 | 707 | -10 -12 -21 | -13 -22 -39 | 70~ | 1.5.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4. | -11 | 97 |
| ŀ | V A L | A75 | 6 -13 -21 | 156 | /Phpt | FLL - 10 | -12 -20 -35 | 124 | 170 | UCA -10 -18 -18 | 975 |
| | - - - - | **450 | AND AF -5 -10 -21 | 91.155 -5 -10 -21 | 5 10 17 17 17 | CA #P9E | CARSON -5 | EUST1 | ного -6 -10 -21 | HUAC → UC → | NO P |
| | | UL ')CT | FNGL -4 -7 -18 | FDR1 -3 -17 | F 1981 | 11011 | 10F 15 105 | F087 3 4 16 | F081 | 1.7 | 1000 |
| | | 7 2 | - 1 - 1 | 700 | 4 2 0 | 900 | 758 | 400 | 610 | 131 | |
| | | 4 PP | 10 -15 -31 | -6 -15 -30 | 10 9 15 23 | 0 7 6 | 10 -14 -23 | 0 L 1 1 0 1 0 1 | 17- 115 -31 | 15 114 130 | |
| | | ۸۲۲ | -20 | -19 | 13 6 6 6 | 0 - 2 - 8 - 1 - 8 | -19 -19 | 61 81 81 | 120 | -17 -13 | ~~ < |
| | | FEET | EGLIN AFB 5CC0 10CC0 18C00 | FGL IN AFB 5000 10000 18000 | FGLIN AFR 5030 10000 18000 | EGL IN AFM 5000 10000 13000 | 5000 5000 10000 10000 | FCLIV AF8 5000 10000 18000 | EGL TN AFB FC00 10C00 18C00 | F GL IN AFF 5000 10000 18000 | # GL IN AFB \$CC0 10000 |

HEADMINDS--COMPUTED FOR A 120-KT AIRSPEED. * DENDES SANDAL EQUINALENINIES. *** DENDES SANDAL EQUINALENT MENDMINDS FOR INDICATED PER CENT RELIABILITIES. *** INUS SIGN DENDTES HEADMINDS.

FRUITALENT MEADETUNS AND STANDAGO DEVIATION IN CALIFS FUR GREAT CICLLE AIR POUTES

| STANDARD DEVIATION | JAN APP JUL OCT | 12 12 9 10 13 13 9 12 19 10 17 | 1934 441. | 170 A.R. | 27 27 27 27 27 27 27 27 27 27 27 27 27 2 | # 22.2 # 22.2 22.2 22.2 | 222 222 222 222 | | 200 | |
|--------------------|-----------------|--------------------------------------|---|----------------------------------|--|--|--------------------------|--------------------|--|--------|
| | 465 | 177 | 7~~ | 7-5 | 17~ | 77- | 177 | 7-0 | 728 | *** |
| | A75 | 170 | 7 | 7~= | 7-5 | 764 | 775 | 7~- | 775 | ÷?? |
| | 06493 | ~ • 0 | ~~= | ~== | *** | *** | 777 | ~~2 | 077 | 777 |
| | A ETURN | **= | ~** | - F F | *~ = | *~2 | 007 | ~== | 077 | 775 |
| | -12 | 122 | ~~= | | | M | ••- | | ~-0 | 111 |
| 0 4 1 | 101 | *** | ~22 | *2% | *22 | *12 | 007 | ~=% | *77 | 772 |
| 4 F 4 | 4 | *91 | 122 | *28 | ~25 | -22 | 771 | *28 | ~75 | 277 |
| 1 10 3 | 464 | 170 | 995 | 755 | 557 | ?? 7 | 177 | 22. | 117 | 70~ |
| 1 | 475 | 111 | 153 | 777 | 777 | 5777 | 777 | TŞŞ | 112 | 7 |
| V 1 1 2 | | 15 AVF 2400 FT | \$177 E | £ 777 | ±*77 | \$ 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 | 11 TCME. | ş ⁷ 7 7 | 3770 | **** |
| | 1 30 W | 5177 | 122 | 5777 | 6117 | 2177 | 3071 | <u> </u> | | ž: |
| | 100 | 777 | 717 | 777 | 771 | 777 | 007 | 717 | 770 | ••• |
| | 30.0 | 117 | 21=2 | £ 155 | - 111 | 5752 | 5777 | 2777 | 2002 | 2-22 |
| | ۸۹۲ | 350 | 112 | 177 | 101 | 195 | •19 | 177 | 7~5 | 221 |
| | | ů. | 64 | 5 | 5 4 | • | | Ę | 1 | • |
| THE I SHY | 2 | 7 700 | \$ 5000 \$ 5000 1 7 500 1 7 500 1 7 500 | 19000 19000 19000 19000 | 15600 15600 19600 19600 | 15.7 2000 1000 1000 1000 | 2000 | 2000 | 2000 2000 1000 1000 1000 1000 | 2000 T |

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FOULVAIENT AFADAINDS AND STANDARD DIVIDATION NA ANNO 101- GAFAT DIRECT AND ADDITION

| 301 V 8L 5 | *** ATS 185 JAY AP- JR UCT **** APS ABS JAN APF | TO HUNTSVILLE 250 to 12 10 12 11 13 13 9 11 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 70 JACKSCNVILLF 7 3 4 5 -2 -3 -9 -7 -3 -4 -6 -13 -15 12 8 11 15 3 5 9 J -1 -19 -15 -3 -5 -10 -20 -23 13 13 9 12 28 4 16 19 5 3 -37 -37 -3 -18 -21 -37 -41 18 18 10 16 | TO 457 WeMIS -1 -1 -1 -1 -2 -4 -5 11 10 7 9 3 -2 0 0 -1 -9 -11 12 11 7 10 13 0 4 5 -3 -5 -10 -17 0 -6 -9 -21 -24 10 15 8 13 | TC LAFSON AFB -4 -2 -4 -9 -11 5 4 2 4 3 -1 -2 8 8 5 7 -11 -5 -10 -11 -18 -20 16 10 5 9 9 3 2 9 9 7 8 -23 -13 -22 -22 -33 -35 26 18 11 18 17 8 6 14 13 9 13 | TO LITTLE FOCK -5 -1 -3 -4 -12 -14 | 70 LCCKPCURNE 3 2 1 2 -4 -6 -7 -4 -2 -2 -4 -11 -13 12 12 8 11 4 3 3 -4 -6 -13 -8 -3 -4 -7 -16 -18 13 13 9 13 3 1 5 4 -0 -9 -27 -14 -2 -12 -13 -27 -31 19 19 11 18 | 6 5 5 6 0 -1 -10 -7 -5 -6 -7 -14 -15 11 10 7 9 11 7 9 10 3 1 -21 -15 -9 -11 -14 -22 -24 12 12 8 11 15 9 19 15 5 3 -39 -23 -12 -24 -23 -37 -40 17 16 10 16 | The Luke series -4 -1 -2 -4 -4 -10 -4 -1 -2 -4 -4 -10 -14 -1 -2 -13 -18 -20 -15 -1 -1 -2 -13 -18 -20 -15 -1 -1 -2 -21 -35 -38 -29 -3 -17 -21 -35 -38 -20 -3 -41 -41 -41 -41 -41 -41 -41 -41 -41 -41 | |
|------------|---|---|--|--|---|-------------------------------------|--|---|---|---|
| 301 V 8L 5 | l ant | 10 00 1 | 10 20 20 20 20 20 20 20 20 20 20 20 20 20 | 11 3 -2 13 0 | 10 -4 -2 -11 -5 -23 -13 | 775 | 20 M M M M M M M M M M M M M M M M M M M | 11 11 15 9 | 17 2- 4- 1- 14 -29 -1 | - |

OHEADWINDS--COMPOUTED FOR A 120-KT AIRSPEED.

OOA--PEGOTES ANYUAL FOLITVALENT HEADWINDS FOR INDICATED PEP CENT FELIAMILITIES.

WINUS SIGN PROTES HEADWINDS.

EGULVALENT HEADWINDS AND STANDAFD CEVIATION IN KNOTS FOR GREAT CIRCLE AIR FOUTES

| NO | 100 | 11. | | 1021 | . · | e E | 1227 | 1127 | .029 | 12 |
|--------------------|------------------|------------------------------------|---|---|------------------------|----------------------------------|---|--|---------------------------------|---|
| ATI | | Z. | £ . | 1 | ž | ¥ . | ž | ž | i | £ . |
| E V (| חר | 999101 | 953 | 920 | 63 8 10 | *** | 751 9 9 10 | 3,00 | 139 9 10 | \$ 5 \$ 8 |
| ARD C | 4 PP | 13 14 19 | 662 | 128 | 10 10 11 16 | 2007 | 122 | 12 14 16 18 | 113 | 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 |
| STANDARD DEVLATION | JAR | 13 14 20 | 9 E1 | 12 18 | 111 | 202 | 113 | 13 | 13 | 20 - |
| | es | | 488 | 191 | m=0 | W = W | 15 | E 1 0 | 14 20 34 | won |
| | A | | | | • • | • | 111 | | 111 | • |
| | A 75 | 947 | -1-1 | 242 | 707 | 772 | -14 -21 -36 | 700 | -12 -18 -31 | 722 |
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| \$\$ | ETUP GCT | 250 | 0 7 - | 0 m 9 | 51 | 1 2 91 | -14 -20 | 4 9 9 | 1-1-1 | 0 4 5 |
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| P G | 404 | 21 | 5-4 | N 4 0 | 3 7 21 | 13 25 | -15 -15 | 15 28 | -5 -11 -17 | 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 |
| HEA | NAL | 2 6 | 4 8 6 | 04 m | 414 | *22 | -10 -20 -36 | 9 6 9 | -16 | 31.5 |
| E N T | 485 | -12 -18 -31 | -10 -12 -24 | -12 | -13 -19 | -20 | m 00 | -16 -24 -41 | 2 H V | -19 |
| AL | A75 | -10 -15 -28 | 4112 | -10 -15 -28 | -12 | -18 -35 | AND 11 | -14 -21 -38 | 2777 | 9776 |
| v I v | ** 450 | 15 -2 -14 | 7 CITY -3 -5 -10 | ST PAUL -3 -7 -14 | AFB -10 -19 | S AFB -3 -21 | CUMBERL 5 9 13 | PLEANS -6 -11 -21 | FA FALI | C AFB -13 -10 -21 |
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| | APP | -3 -9 -21 | 10 -6 -7 -17 | -3 -7 -15 | 15-10-1 | 10 -4 -13 -29 | 10 12 14 | 91-10 | 2 2 4 6 | 10 -13 -28 |
| | JAN | -11-23 | 467 | 1017 | -15 | 11.5 | 25 | 0 F F F F F F F F F F F F F F F F F F F | 404 | -17 |
| | | a a | 4 | 41 F: | AFA | AF.3 | AF.9 | 8 9 | A 4. | 4 4 |
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MEADWINDS--COMPUTED FOR A 120-KT AIPSPEED.
 MEADWINDS ANNUAL EQUIVALENT MEADWINDS FOR INDICATED PER CENT PELIABILITIES.
 MINUS SIGN DENOTES MEADWINDS.

SHEET 118

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FOULVALENT HEAD-INDS AND STANDAFD CEVIATION IN CURTS FOR GREAT CIACLE ALR PRUTES

| 10 APP. JULIGICY 0000 A75 A65 JAN APP JAK OCT 0005 A75 A65 110 11 | ANY ADMINISTRATION AND ANY ASS, JAN APP JAL FOLDON AND AND AND AND AND AND AND AND AND AN | . HU i SH | | | | 4 | 0.01 | ر د ۱ د | 2 | 1 F | 0 | 2 | | | | | | CTANDAGO | 17.30 | |
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FOUTVALENT HEADMINDS AND STANDAFD DEVIATION IN KNOTS FOR GREAT CINCLE AIR HOUTES

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**A--DENNTES ANNUAL SOUI VALENT HEFABAINDS FOR INDICATED PER CENT FELIABILITIES. MINUS SIGN DENCTES MEADAINDS.

FULL VALENT HEADAINDS AND STANDAPD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR ROUTES

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**A-DENDIES --COMPUTED FOR A 120-KT ALPSPEED. **A-DENDTES ANNUAL EQUIVALENT HEADMINDS FOF INDICATED PER CENT FELIABILITIES. MINUS SIGN DENOTES HEADMINDS.

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*HEADWINDS--COMPUTED FOR A 120-KT AIMSPEED. **A--DEMOTES ANNUAL FOULVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

EQUIVALENT HEADAINDS AND STANDAFD CEVIATION IN KNOTS FOR GREAT CIPCLE AIP ROUTES

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*HEADMINDS--COMPUTED FOR A 126-KT AIRSPEED. **A-DENOTES AVNUAL EQUIVALENT HEADMINDS FOR INDICATED PER CEVT GELIAPILITIES. Minus stay proofs Headminds.

FOULVALENT HEADHINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIFCLE

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*HEADWINDS--CUMPUTED FOR A 120-KT AIPSPEED. **A--DENGTES AVMUAL FQUEVALENT HEADWINDS FOF INDICATED PER CENT PELIABILITIES. MINUS SIGN DENGTES HEADWINDS.

SHFET 127

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN CAPTS FOR GREAT CIPCLE AIP POUTES

*HEADWINDS--COMPUTED FOR A 120-KT AFRSPEED. **A--DENDTES ANNUAL FQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIAHILITIES. *INUS SIGN DENDTES HEADWINDS.

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FULL VALENT HEADWINDS AND STANDARD DEVIATION IN KNUTS FOR GREAT CIPCLE AIR FOUTER

THE BOEING VEGTOL COMPANY

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OPEADMINDS—COMPUTED FOR A 120-KT AIRSPEFD.
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WINUS SIGN RENOTES MEADMINDS.

Suffer 129

FUNIVALENT HEADALUS AND STANDARD DEVIATION IN CYNTS FUE GREAT CIPCLE AIM FRUTES

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FULL ALENT MEADAINDS AND STANDARD DEVIATION IN CUSTS FOR GREAT CIRCLE ALE COMES

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OMEADMINDS—COMPUTED FOR A 120-KT AIRSPEFD.

OMA——DENUTES ANNUAL FOULVALENT MEADMINDS FOR INDICATED DED CEST BELIARILITIES.

MINUS SISK DENUTES MEADMINDS.

S-FET 129

FOUTVALENT HEADMINDS AND STANDAGD DEVIATION IN ANHIS FUE GREAT CIPCLE AIM FOUTES

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| - | | 85 | | | 2 | 31 | | • | - | ~ | | 9 | ۵ | 5 | | | -23 | ő | | * | 0 | _ | | | ٠ د | | c | | ~ | , | 10 | • | • | - | 0 | _ | , |
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|) A | _ ! | | SECTION TO | 2000 | 8 | 18000 | ELL SMOF TH | 2005 | 10000 | 000 | EL SMOFTH | 2000 | 00 | 3 | ELL SAUF TH | 2000 | င္ပ | 3 | FLL SMOF TH | 2000 | 00 | 00 | FLL SWOF TH | 5000 | 88 | | FLL SMC6 TH | ÚQ. | 8 | ELL SWOF TH | 9 | 8 | 8 | ELL SWOPTH AFR | 8 | 8 | S |
| 191 34 | 2 | 1314 | ū | 2 | 100 | E | ELL | 5 | 100 | 18(| E) L | 56 | 10000 | 18(| ELL | 2 | 10000 | 0 | FLL | 25 | 10001 | 19000 | FLL | 35. | 18000 | | 50 | 10000 | 180 | 11: | , | 10000 | 180 | ELL | 2000 | 10000 | 18000 |

*HEADKINDS--COMPUTED FOR A 120-KT ATRSPEED. **A--DENOTES ANNUAL FOULVALENT HEADKINDS FOR INDICATED PER CENT FELTARILITIES. *INUS SIG: DENOTES HEADAINDS.

FOULVALENT HEADMINDS AND STANDAFF DEVIATION IN KAUTS FOR GEET CINCLE AIR GOUTES

| тна Іент | | | | . L | מ נו מ | . □ ◀ | LENT | HEAD | ٠ . | SON | | 5 | 77.17 | • | STAV | STANDARD | DEVIATION | É |
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| ELL S#06 TH 5000 10000 18000 | 1 AFR B 16 23 | 10 10 16 | 4 9 51 | МЕМРН 6 11 13 | 41S 5 10 16 16 | 1725 | ~ o~ | -10 -19 -33 | -6 -12 -22 | 2.1.4. | -12 -12 | -1 -13 -22 | -14 -21 -35 | -16 -23 -38 | 51 21 21 | 21 21 19 | 639 M. | ÷022 |
| ELL SWOK TH FG00 10000 18000 | 1 AFB | £ 9 7 7 | - 2 2 | 4F X I C -1 0 | 50 CITY | 279 | 1 9 7 | -17 | 404 | ~ ~ ~ | | mom | | 7-7-1- | ••• | 1 9 9 71 | 536 No. | 2 |
| FLL SMUP TH 5 C C O 1 C C C O 1 B C C C O | 4 AF8 11 2.0 31 | 77 5 10 21 | 044 | 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | -ST PAUL 1 14 25 | _ c | m m o | -12 -21 -35 | 11- | -14 | - 1 e | - 15 - 15 - 28 | 57- | -119 | 712 | 114 | 420 % 111 111 13 | #: #: #: |
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| ELLSWOFTH 5000 10000 18000 | 1 AFB 13 19 | 1447 | -17 | 4FLL1 | 15 AF9 -4 -8 -18 | 67 - 91 - 67 - | -10 -15 -32 | m ~ g | * 5 2 | E - 51 | 740 | w 9 E | 70- | 7 | 20 | 000 | 7 | |
| ELL SMOH TH 5CC0 10CG0 18CC0 | 1 AFR 23 24 57 | 10 8 15 24 | 124 | NF E 0 | CUMBERL 9 16 26 | AND 2 2 3 3 15 15 | 13 60 | -14 | 97- | -1 -14 -23 | -16 -30 | - 10 | -17 -26 -42 | -19 | 171 | 11211 | · · · : | -222 |
| FLL Swore TH 5000 13000 18000 | 1 PT L | 7 | CAN | 4 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 | UFLEANS 2 6 11 | 40- | 100 | -14 -27 | 1667 | 765 | 500 | 119 | -11 | -13 -19 -32 | 777 | 777 | 091 M | 50 115 |
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| ELLSWOFTH 5C00 1CCC0 13C00 | 1 AFR -3 -9 -22 | 7C -4 -17 | -2 -7 -16 | CXVAF -1 -7 -15 | FD AFB -3 -13 | 11-12-23 | 4- 1-10- | 774 | 4 2 2 | 2 - 3 | - 9 - | 705 | 70 m | 770 | ~ 2 2 | 101 | 16 2 - 1 | |
| * HEADWINDS | | -COMPLITED | 903 | 176 | N-KT A | 330 33 | | | | | | | | | • | | | |

**A-DEPOTES ANNUAL FOULVALENT **ADMINDS FOR INCICATED PER CENT FELIABILITIES.

EAUTALENT HEADMINDS AND STANDAED DEVIATION IN KANTS FOR BEFAT CLEDLE ALP FOUTES

| FILESCOPE AND THE COLOR AND TH | ₩ 16H1 | | | | | כי מיוי | 136 | FRI | HEA | # O # | 1 1 0 | | | | | STAND | OAAO | STANDAPD DEVIATION | 80 = |
|--|---|--------|---------------------|---------------|-------------------------|---------------------------|-------------------|-------------------|------------------|-------------------|------------------|-------------|---------------|-------------------|-------------------|----------|--------|---|---------|
| | 2 · · | 14¢ľ | 4.04 | JOL | | ** 45 | ~ | 90 | | 0. | | ETUP CCT | 4 | - | 60 | 100 | | 101 | 100 |
| | 11 SWOF THE COO | Δ 1 | 10 10 13 | 25.0 | | CK AF 4 8 8 8 | 1 | 700 | -8 -17 -32 | -12 -12 -24 | -3 -11 | 1 - 2 | 1 = 7 | -12 -18 -33 | -13 -20 -36 | | 7000 | 2 ~ ~ ~ | • |
| Fig. | LL SWOP TH 5000 0000 9000 | 4 | T) 1+ 24 | 6 14 22 | 5 2 6 | 9UF | - 7 4 | 0 9 6 | 4 74 | 1 7 2 | 1-0 | -16 -30 | | -17 | 104 | | 7-78 | 200- | |
| FTH AFE | 1L SMCF T+ 5000 3000 8000 | ⋖ | T0 -7 -10 | 0 1 9 | _ | 4 1 1 | -12 -16 -25 | -14 -19 -29 | N P P | 222 | 0 ~ 0 | ~ 9 ~ | → 0. 4 | 17. | | 112 | | 2257 | = |
| | LL SWOF T+ 5 CCU 0000 8 CCO | 41 | 10 6 12 19 | - | _ | A | 040 | 404 | → C: C | 1 - ~ | 11. | 1 -1 | 1 - 2 | -16 -24 -39 | -18 -26 -42 | 12 13 20 | ~~~ | % o 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 | = |
| 1 | 1 L S#0F Tr 5 CC 5 CC 5 CC 9 CO 0 | 4 | 13 13 | | SF1 F1 9 16 26 | P I DGE 8 16 26 | Œ. | 0 \$ 2 | - CM | 1 - 2 | 1 - 2 | -10 | | -17 | -2 | 126 | N M 30 | 12 P | £ ~ ~ ~ |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | 4 | + | 10 7 13 21 | ~ | SHAW 7 111 21 | FA 1 | 0 5 10 | O M W | - N M | -8 -15 -27 | -16 | 1 - ~ | 1 - 0 | -15 -23 -38 | 124 | | ~o~• | 8 8 7 | £° = 4 |
| JFTH AFE TD WURTSMITH 12 5 7 9 8 0 -1 -13 -6 -7 -10 -9 -17 -19 12 12 12 9 22 12 15 16 16 8 6 -23 -13 -15 -17 -19 12 12 13 10 34 22 24 26 26 14 12 -3 -25 -29 -29 -29 -41 -44 19 18 12 19 14 12 -12 -13 -13 -17 -19 17 -19 12 -28 13 10 19 14 12 -23 -15 -17 -17 -19 -26 -13 10 10 10 10 10 19 14 -16 12 -13 -15 -12 -13 -14 -14 -21 -29 -4 -4 19 10 9 -20 -11 -9 -14 -14 -21 -23 -3 -3 -3 -4 10 9 19 19 19 19 19 <td>1L S#06 TH 5C00 5C00 8C00</td> <td>41</td> <td>19 14 14</td> <td></td> <td>-</td> <td>VEF.</td> <td>T -</td> <td>0 1 4</td> <td>-N4</td> <td>-16</td> <td>1-0</td> <td></td> <td></td> <td>-17</td> <td>-N4</td> <td>111</td> <td>-</td> <td>1.001</td> <td>5</td> | 1L S#06 TH 5C00 5C00 8C00 | 41 | 19 14 14 | | - | VEF. | T - | 0 1 4 | -N4 | -16 | 1-0 | | | -17 | -N4 | 111 | - | 1.001 | 5 |
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| | LL SWOP TH | 4 | To -5 -11 -21 | 1 1 7 | _ | - 1 l' | - N E | - 2 | 19 | 18 | E 6 61 | | 5 12 21 | 0 % 0 | | | | 37 m | E |

*HEADKINDS--COMPUTED FOR A 120-KT AIRSPEED.
**A--DEMOTES ANVUAL FOULVALENT HEADWINDS FOR INDICATED PEF CENT PELIABILITIES.
*INUS SIGN DEMOTES HEADWINDS.

EQUIVALENT HEADBINDS AND STANDAGO DEVIATION

| The color of the | 0 | 4 21 24 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 | | 10 044 044 CEL CAL | 00CT | •• • • • • • • • • • • • • • • • • • • | | A & & & & & & & & & & & & & & & & & & & | JAN 113 113 1150 1150 1150 1150 1150 1150 1 | 1129 1139 1139 1139 1139 1139 1139 1139 | |
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| Control of the properties | 13 -13 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 | 5 5 4 7 5 5 7 6 6 7 7 7 | • | | 1 - 1 - 1 - | 140 047 084 | | -12 -12 -24 -54 | 22.4 | 1362 | |
| 1 | 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - | 244 LLL 540 CLL | 1 | 1 21 | 1 - 1 - 1 - | 140 047 054 | | -13 -13 -12 -24 | 252 235 | 1812 | |
| Fig. 7993 | 2 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 | 1 | 1 | | 1 - 1 - | 20 010 054 | | -13 -26 -12 -24 -5 | 45.4 636 | 1912 | |
| FIGURE AFA FIGURE | C C C C C C C C C C C C C C C C C C C | t ' | 1 | - 1 | 1 - 1 - | 247 054 | | -12 | 272 | | |
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| The state of the | 7 -1 3 -1 3 1 7 3 3 1 1 1 1 2 2 2 2 2 5 5 5 6 6 7 1 1 2 2 1 2 2 2 1 3 0 0 1 4 1 L L AF 1 4 1 L L AF 1 7 3 0 1 8 1 0 1 8 1 0 1 9 1 | 1 | 1 | 17 | 1 7 | 347 024 | | 27.7 | 225 | 11.23 | |
| 1 3 5 -1 -6 -19 -9 -10 -10 -12 -22 -24 | 7 3 4111 af 3 1 7 7 3 1 5 5 5 6 5 5 6 7 8 1 8 9 1 9 0 1 | 1 | 1 | 7 | | 7 054 | | -24 | 11 | | |
| HILL 3F 1 | -2 -2 -2 -2 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 | 1 | • | | 1 - | 0 5 4 | | . | | \$ 23 | |
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| 10 Lab Son 4FH -25 -78 3 8 5 11 7 -6 -10 24 20 13 14 14 14 15 15 15 15 15 | -3 -14 0 -2 3 0 7 3 0 0 7 9 | 7 | 2 | | œ | ď | , 4 | | • | - | = : |
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| 2) 1 -4 -5 -8 -3 -3 -2 -4 -10 -12 -12 -12 -12 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -13 -22 -24 -12 -14 -14 -14 -14 -14 -14 -14 -14 -14 -14 | 7- 6 | 1- 5- | | | • | c | ŗ | | , | 1990 K | · HI. |
| 6 5 7 - 1 - 5 - 1 - 6 - 1 - 1 - 1 - 6 - 9 - 1 - 1 - 6 - 9 | | 1 | ' | | · ` | . | n c | . : | 29 (| ٠ ا | ~ (|
| | | • | 20 -1 | | - | | 200 | 77 | 2 : | | • |

*MEADWINDS--COMPDIFY FOR A 120-KT AIRSPFFD. **A--DENGTES ANNUAL FULLVALENT HEADAINDS FOR INDICATED PER CENT FELTAMILITIES. *THOS SICH TENGTES HEADWINDS.

FOUTVALENT HEADMINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR FOUTES

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*HFADNINDS--CCMPUTED FOR A 120-KT AIRSPEED. **A--DEYSTES ANNUAL FOULVALENT HEADWINDS FOR INDICATED PEP CENT RELIABILITIES. WINUS SIGN DENOTES HEADWINDS.

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FOULVALENT HEADWINDS AND STANDAPD DEVIATION IN KNOTS FOR GPEAT CIPCLE AIR ROUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES ANNUAL FQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR ROUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIPSPEED. **A--DENDTES ANNUAL EQUIVALENT HEADWINDS FOP INDICATED PER CENT FELIABILITIES. MINUS SIGN DENDTES HEADWINDS.

THE BOEING VERTUL COMPANY

EQUIVALENT HEAD AINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR POUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIFSPEED. **A--DENGTES ANNUAL FOUTVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. #INUS SIGN DENGTES HFADWINDS.

EQUIVALENT HEADALNDS AND STANDAKE DEVIATION IN ANUTS FER GREAT CIFCLE ALF FOUTES

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*HEADWINDS--COMPUTED FOR A 120-KT ATGSPEED. **A--OFNOTES ANNUAL FOULVALENT HEADWINDS FOR INDICATED PER CENT HELIARILITIES. MINUS STGN DENOTES HEADWINDS.

EQUIVALENT HEADWINDS AND STANDAFD DEVIATION IN KNUTS FOR GREAT CIRCLE AIR ROUTES

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**A--DENDTES ANNUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES.

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIFCLE AIR ROUTES

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OMEADMINDS--COMPUTED FOR A 120-KT AIRSPEED.

OOA--DEMITS ANNUAL FOULVALENT MEADMINNS FOR INDICATED OF CENT FELIAMILITIES.

MINUS SICK DENUTES MEADMINUS.

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FRUITMENT MEADMINDS AND STANDAFD DEVIATION IN ANDTS FOR SPEAT CIPCLE AIR POUTES

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FOULVALENT HEADMINDS AND STANDALD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR MOUTES

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*MEADLINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DF-40TES ANNUAL FOUT VALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES. *INUS SIGN DENOTES MEADMINDS.

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EULIVALENT HEADMINDS AND STANDAPD DEVIATION IN CHUTS FOR GREAT CIFCLE AIP ROUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. PINUS SIGN DENOTES HEADWINDS.

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIP FOUTES

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*MEADMINDS--COMPUTED FOR A 120-KT AFRSPEED.
**A--DENOTES ANNUAL EQUIVALENT MEADMINDS FOF INDICATED PEF CENT PELIABILITIES.
MINUS SIGN DENOTES MFADMINDS.

THE ROFING VEFTOL COMPANY

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**HEADMINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENDTES ANNUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN JENOTES HEADMINDS.

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR ROUTES

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*HEADWINDS--COMPUTED FOR A: 126-KT AIRSPEED. **A--DENJTES ANNUAL EGUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENDTES HEADWINDS.

SHEET 146

EQUIVALENT HEARMINDS AND STANDARD DEVIATION IN ANOTS FOR GREAT CIPCLE AIR ROUTES

| STANDARD DEVIATION | JAN APP JUL COT | 686 N.MI. 12 12 8 10 12 12 9 12 19 17 10 17 | 12 12 8 10 14 12 9 12 16 17 10 16 | 1970 N.MI. 9 9 7 6 10 10 7 9 13 13 9 13 | 631 No.41. 13 12 9 11 14 14 10 13 20 20 11 19 | 1391 N.MI. 9 9 6 8 10 10 8 9 | 11 10 7 10 12 12 8 11 16 16 9 14 | 13 12 9 11 14 14 9 13 2C 20 11 18 | 156 N.MI. 14 13 9 12 15 15 10 14 21 20 11 19 | 209 NoNE. 12 12 0 11 14 14 9 13 19 19 10 17 |
|--------------------|-----------------|--|---|--|--|--|--|---|---|--|
| | 485 | 7=5 | 70 m | -10 -13 -22 | 664 | m u r | -12 | -17 -26 -46 | 794 | -13 -21 -37 |
| | A 75 | 0 6 2 | 0 7 6 | -111 | -10 | 140 | -10 | -15 | V € → | -11 |
| | N **A 50 | 6 112 20 | 6 11 20 | 15 | 0=0 | 13 | 195 | -7 -12 -23 | 0 R. D. | 1 0 0 1 |
| \$ | ETUR CCT | 61 | ~ * * | -4 -5 -11 | | w 3 5 | 000 | 1-10 | N M D | 1.44 |
| 2 | JUL | w + 0 | 4 10 10 | E E 5 | 0-6 | 291 | 710 | 110 | ~~• | -2 -2 -2 -2 |
| 1 10 | APR | 8 16 29 | 8 9 0 | 2 6 8 | -77 | 12 23 | -11- | -8 -18 -32 | e 62 | -5 -13 |
| HEAD | N W C | 6 52 36 | 10 22 38 | -3 -18 | 4 | 2 08 | -6 -18 | -10 -22 -40 | 462 | -16 -32 |
| ENT | 485 | -16 -26 -44 | -17 | 2 4 B | -12 -16 -27 | -11 -21 -39 | 07 9 | 404 | -14 -21 -35 | 440 |
| , ₄ | 475 | -15 -23 -40 | -15 -23 -40 | 111 | -10 | -10 | 797 | 7-0 | -12 -18 -31 | 470 |
| v 1 0 0 | **450 | SILL -7 -13 -24 | #0LTEFS -7 -13 -24 | SHER I | МТСНЕЦ -2 -5 -11 | AFB -4 -12 -23 | TEAD AFB | R AAF 6 111 20 | 91- 19- 19- | KSUNVILLE 3 6 13 |
| | PCT OCT | +06 T -5 -10 -21 | FORT -5 | FP081 3 2 3 | GEN 1-13-1-10 | HILL -3 -10 -22 | HOMES 0 0 3 | HUNTE 5 18 | HUNTS -3 -14 | JACKS |
| . 1 | JUL UC | 245 | 4 6 4 | 2 | 175 | -2 -6 -12 | 710 | 400 | 779 | - ~ 5 |
| | APR | 10 -8 -17 -32 | 17) -17 -32 | C000 | 10 -3 -6 -13 | -13 -13 | 00 60 | 10 17 29 | -5 -11 -23 | 12 21 |
| | JAN | NING -10 -23 -41 | NING -11 -23 -41 | 0 N I N | NING -3 -8 -17 | NING - 61- - 19 - 36 | NING -3 3 | NING 9 21 21 37 | 114 - 5 - 14 - 27 | NING 4 13 24 |
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*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENDES ANNUAL FOULVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENDTES HEADWINDS.

EQUIVALENT HEADWINDS AND STANDAFU DEVIATION IN KNOTS FOR GEEAT CIACLE AIR POUTES

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| | NAC | 7 00 | 3 | اخ | ** A50 | A75 | 485 | 2 4 | ADA | 3 | 200 | ** A 50 | A75 | A 85 | JAR | 2 | JUL | 100 |
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| 18000 | . | • | 0 | 0 | - | 7 | 9 | -13 | -12 | 0 | ņ | 9 | -17 | 07- | 22 | : 2 | • | :: |
| FORT BENNING | SNING | 10 | | LAFS | SCN AFR | | | | | | | | | | | • | | |
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**FADAINDS--THEPUTED FOR A 12C-KT AIPSPEED. **A-PENCTES ANYUAL FQUIVALENT HEADMINDS FOR INFICATED PER CENT PELIABILITIES. MINUS SIGN DENOTES HEADMINDS.

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FOUTVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR ROUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A-DENDTES ANNUAL FOUTVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

EGULVALENT HEADAINDS AND STANDAFD DEVIATION IN KNUTS FOR GREAT CIFCLE AIR FOUTES

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*HEADMINDS--COMPUTED FOR A 120-KT AIRSPEED. **A-DENOTES AWNUAL EQUIVALENT HEADKINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADMINDS.

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BULVALENT HEADAINDS AND STANDARD DEVIATION IN ANDTS FOR GREAT CIRCLE AIR ROUTES

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EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIFCLE AIR ROUTES

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*HEADMINDS--COMPUTED FOR A 120-KT AIRSPEED. **A-DENUTES ANNUAL GUULVALENT HEADMINDS FOR INDICATED JOG CENT HELIAMILITIES. **INUS SION DENUTES **EADMINDS.

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EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT (14CLE ATA FOUTES

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| 16.15.5 TO MEXICO CITY -7 -8 -7 -3 -7 -12 -13 7 8 8 3 6 1 0 9 8 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 2000 2000 10000 18000 | | 10 16 28 | N 4 0 | I | S | 076 | 7-4 | 139 | -8 -17 -31 | 444 | 5-1-61- | -7 -13 -23 | -1¢ | -15 | 121 | ~ ===2 | E | f. 22 |
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*HEADMINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES AMNUAL FQUIVALENT HEADMINDS FOR INDICATED PER CENT PELIABILITIES. #INUS SIGN DENOTES HEADMINDS.

EQUIVALENT HEADWINDS AND STANTAGN DEVIATION IN KNOTS FOR GREAT CIPCLE AIR FOUTES

| | STANDARD DEVIATION | JAN APR JUL OCT | 1 4 | 01 0 | 11 6 11 17 19 11 19 19 | | 1015 N.MI. | • | - | 18 15 10 15 | 1 | 600 | | 20 18 11 16 | | | | 10 15 0 15 | | | | 17 15 9 14 | | • | 20 | | | 60 | | | | | | • | 14 13 7 12 | 1364 4,41 | 10 | 01 4 01 11 |
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| ; | ١ | A75 | | -15 | -16 | | • | 3 | | 2 | | - | | • 13 | | | 67 | | | | | m | | 4 | -22 | m | | ı | ٥ (| , m | | - | - | 0 | ñ | | -15 | |
| | | **A50 | | 9 | -17 | | | | 7 9 | | | ? | | `= | | | | 52 | | 4 | 6 | -20 | | 9 | ~ | | | c t | • • | 2 | | | * | 7 | V | | 6 | - 15 |
| | 13 | | | * | 7 : | | 3.5 | | 1 | | | 1 | • | 10 | | t | | • • | | - | 1 | -16 | | -7 | -12 | -23 | | 7 | 4 | 11 | | | | 0 4 | | | - | == |
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|) : | 1 | 567 | | 91 | 1 5 | | • | | 7 3 | | | C | 'n | 4. | | 7 | 10 | -31 | | 5 | | -29 | | 0 | | -28 | | - | 2 | 22 | | | | 200 | J | | 6 | -12 |
| 1 | J | JAN | | ? ; | 52- 21- | | | , , | 1 1 | | | ï | | 23 | | - | | 77- | | - | -18 | • | | -11 | -22 | 9 | | c | 11 | 92 | | 4 | | 5 | ١. | | 7 | \$7- |
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| - | | 65544 | 5 ₽ | ir 4 | P (1) | | | ď | | , | S AFB | ~1 | f | 7:1 | _ | - | - | 77 | FLEAVS | | æ | 11 | FA FALL | ~ | 71 | | C AF B | C | - | -17 | CK AFR | · ~ | 1 72 | 17 | • | BURGH | | 9 |
| u | و ا | 2 | | 4 11 | n #r | 2 | , | . ~ | ` T | • | 17138 | 2 | ; | 7 | , u | | C | 20 | Se se | ~ | ٥ | 51 | NI AGA | 1 | 9: | 9 | JE NA DE | 4 | ? | -13 | PATE | | ·.• | . | | 13 | ٠ - | |
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| | | ad : | ξ. | ۰ م | 12 | • | · m | (C) | 0 | 1 | C | C | C | -73 | | ന | 11 | 42 | 10 | 4 | 13 | 27 | 10 | 1 | 15 | S | F | 7 | 2- | -25 | - | • | 13 | 27 | 1 | - . | , | , L |
| | | \ 3 F | | 1 7 | 13 | | - | - | -3 | | | - | -1: | £ 7- | | 0.1 | 73 | 98 | | ٥ | ST | <u>س</u> | | 10 | 20 | Ĉ | | 0 | -15 | -30 | | ٨ | 17 | 32 | | • | ֓֞֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֡֓֡֓֓֓֡֓֡֓֓֡֓ | 1 . |
| ± 16H1 | Z | FFET | FCAT ALISS | 10000 | 1,000 | FORT BLISS | 5000 | 10000 | 19000 | | FORT RLISS | | 10001 | | Print ALISS | 2000 | 1 3 0 0 0 | 18000 | FORT ALISS | 5000 | 00001 | 18000 | FORT ALISS | | 10000 | | FIRT ALISS | | | 1 9 0 0 0 | Solle Laus | 9000 | 00001 | 1 9000 | | SI ld tail | 0000 | 00081 |

*HEADWILLS--COMPUTED FOR A 120-KT AISSPERU. **1--PERUTES ANGUAL EQUIVALENT HEADWILL: "F INDICATED PEH CENT FELIAGILITIES. MINUS SICA DENOTES HEADWINDS.

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COULVALENT HEADMINDS AND STANDARD DEVIATION IN CAUTS FOR GREAT CINCLE ARE BOUTES

| STANDARD DEWIATION | T | 65 JAN APP JUL OCT | 1121 M.MI. | 16 11 11 6 9 24 12 11 9 11 40 17 10 16 | 1292 North | -14 10 9 6 9 -24 10 10 7 10 -42 15 14 6 14 | 1724 16.MC. | 1316 mm; | | 1900 th 1000 t | 20 01 01 01 01 01 01 01 01 01 01 01 01 01 |
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FOULTALENT HEADWINDS AND STANDARD DEVIATION IN KNUTS FOR GREAT CIRCLE AIR ADUTES

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NIMES SIGN DENOTES NEADMINES.

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EQUIVALENT MEAUMINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR FOUTES

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OMEADMINDS--COMPUTED FOR A 120-KT AIRSPEED.

OOA--DENOTES AMULAL FOUT VALENT MEADMINDS FOR INDICATED PER CENT PELIABILITIES.

WINUS SIGN DENOTES MEADMINDS.

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR ROUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIPSPEED.

****-PENOTFS ANNUAL EQUIVALENT HEADWINDS FUP INDICATED PER CENT RELIABILITIES.

MINUS SIGN DENOTES HEADWINDS.

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EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN ANDTS FOR GREAT CIPCLE AIR POUTES

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| TO REGINA -7 -5 -6 -8 -15 -16 10 6 5 7 6 0 0 10 10 10 10 10 10 10 10 10 10 10 10 10 | 18000 | -11 | -15 | 1 | T | -10 | -24 | -27 | • • | | - | 9 4 | > - | | 01: | 2 | 2 | 0 | = |
| TO REGINA -7 -5 -6 -8 -15 -16 10 6 5 7 6 0 0 10 10 10 10 10 10 10 10 10 10 10 10 10 | | | | | | , | , | ; | | • | • | • | • | * 1 | ₹. | 77 | 77 | 21 | 77 |
| -7 -5 -6 -8 -15 -16 10 6 5 7 6 0 0 10 10 6 10 10 10 10 10 10 10 10 10 10 10 10 10 | FORT SPA | GG/POPE | 0 | | - | • | | | | | | | | | | | | | ; |
| 10 -14 -11 -13 -15 -23 -24 19 12 10 11 12 5 4 10 11 0 -24 -18 -25 -36 -39 27 19 15 19 10 7 16 15 10 10 -6 -6 -6 -6 17 -19 13 9 6 6 8 0 -1 13 12 0 -20 -9 -10 -16 -27 -30 24 18 9 9 14 5 2 14 16 10 -32 -13 -25 -27 -43 -47 37 28 13 21 23 10 7 20 20 11 | 0000 | 11- | 7 | • | • | | -15 | -16 | 2 | • | \$ | ~ | • | 0 | 0 | 9 | • _ | | • |
| TC SCOTT AFB -26 -19 -25 -26 -39 27 19 15 19 10 7 16 15 10 TC SCOTT AFB -10 -6 -6 -9 -17 -19 13 9 6 6 8 0 -1 13 12 8 -20 -9 -10 -16 -27 -30 24 18 9 9 14 5 2 14 14 10 -32 -13 -25 -27 -43 -47 37 28 13 21 23 10 7 20 20 11 | 0000 | 27- | = | 7 | -13 | -15 | -23 | -24 | 2 | 12 | 2 | 11 | 12 | 5 | • | 9 | = | • | |
| TC SCOTT AFB -10 -6 -6 -6 -9 -17 -19 | 18000 | -30 | *7- | 7 | -52 | -52 | -36 | -39 | 27 | 61 | 2 | 61 | 2 | 01 | ~ | 2 | 2 | 0 | 2 |
| -10 -6 -6 -9 -17 -19 13 9 6 6 8 0 -1 13 12 8 -20 -9 -10 -16 -27 -30 24 18 9 9 14 5 2 14 14 10 -32 -13 -25 -27 -43 -47 37 28 13 21 23 10 7 20 20 11 | FORT BPA | GG/POPF | £ | | CCOT | AEA | | | | | | | | | | | | | 1 |
| -27 -20 -9 -10 -16 -27 -30 24 18 9 9 14 5 2 14 14 14 14 14 14 14 14 14 14 14 14 14 | 2000 | -14 | -10 | 4 | 1 | 9 | | • | : | 55 | • | • | • | | | | • | 2 | H. |
| -44 -32 -13 -25 -27 -43 -47 37 28 13 21 23 10 7 20 20 1 | 10000 | -27 | -20 | 7 | 0 | 41- | -27 | | 3 % | | 0 0 | 0 | • | 0 | 7 | 5 | 77 | • | = |
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| | | | | • | | 17 | | • | - | 97 | 2 | 71 | 23 | 2 | ~ | 2 | 20 | = | = |

*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENJTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. Minus sign dendtes Headwinds.

EQUIVALENT HEADWINDS AND STANDAPD DEVIATION IN KNOTS FOP GPEAT CIRCLE AIP POUTES

| | STANDARD DEVIATION | APP JUL OCT | | 483 N.MI. | | 15 10 14 | • | 519 N.MI. | | 15 10 14 | ! | 596 N.MI. | • | 14 10 13 | ! | 1982 | • | 13 0 11 | | 828 M.H. | • (| 16 10 17 |) | 526 N. H | • • | 20 11 20 | | | 13 • 12 | | į | . IN-M 1/11 | . 01 | | 11 6 c1 | 386 N.MT. | | |
|---------|--------------------|-------------|------------------|------------|-------|-------------|-----------------|-----------|-------|------------|---------------|-----------|-------|----------|------------------|------------|----------|---------|---------------|------------|----------|----------|---------------|----------|----------------|----------|---------------|------|---------|-------|---------------|-------------|-------|-------|----------------|---------------|------|-----|
| 2000 | STAND | JAN | | | ET . | 21 | 1 | | 13 | 21 | } | | 2 | 7 71 | | ٥ | 0 (| | | • | 71 | 3 61 | | | 3 2 | 21 | | 1.3 | 33 | 12 | | | 2: | 1. | | | | = |
| 1 | | A 85 | | | 9 | • 01 | | | 11- | 92- | | | 9 | 9 1 | | • | . | `= | • | | | n 0 | | 6 | -32 | -51 | | 7 | • 0 | - | | • | • • | v 4 | • | | - | 7 |
| | | A75 | | | • | 17 | | | -17 | -23 | | | * | - | | - | - 1 | 13 | | • | v | = | | | 07- | 7 | | C | ~ | * | | c | • | • | • | | • | • |
| | | *** 50 | | | ν, | • • | | | | -13 -23 | | | ~ | • | | 4 | ~ | 22 | | 4 | 13 | 2 | | | 81 | - 30 | | 7 | = | 11 | | ٧ | ` = | 2 2 | 3 | | ^ | • |
| : | | 00.1 | | • | ⊶ , | - ~ | | | | -23 | | • | ٠. | | | • | | 23 | | • | 12 | 22 | | | | -28 | | + | • | 15 | | 4 | • 0 | 17 | | | ~ | |
| 3 | 2 | J. (F | | • | ٠, | P 10 | | 4 | • | -12 | | • | ۹ ، | 1 | | ď | ٠, | 11 | | ď | • | 2 | | 1 |) | -15 | | • | S | M | | ď | | 60 |) | | • | 1 |
| 1 | | APP | | • | r V | • | | - 7 | | -23 | | , | t u | 00 | | 1 | 13 | 17 | | 1 | * | 97 | | = | -22 | -34 | | • | 51 | 54 | | 1 | 51 | 27 | ì | | 6 | |
| u 3 | 4 | NAL | | • | • | · w | | - | | - 36 | | , | • 4 | • | | 10 | 7.7 | 31 | | • | 71 | 36 | | -15 | | 64- | | = | 21 | * | | ~ | 20 | 35 | | | = | |
| 1 2 | 1 | 485 | | | | -34 | | 1 | - | C | | 7. | 200 | -33 | | +1- | -23 | -39 | | -17 | -26 | * | | C | • | 2 | | -18 | -25 | 24- | | -14 | -23 | 0 | | | 61- | |
| - | | 475 | | | | -30 | ď | 1 | • < | ~ | | | 77 | 67- | | -13 | -21 | -37 | | -15 | -24 | 64- | | - | ~ | 13 | | -10 | -23 | -38 | 4 | -12 | -21 | -37 | | ORTH | -17- | 75 |
| N 1 0 | | ** 453 | | FIDGE AF | 9 | -16 | CVED AE | ď | ۰ ٥ | 14 | : | T 1 | 9 | -10 | 4 | , 1 | -15 | -51 | CARSON | | -15 | 97- | FUSTIC | | 91 | 56 | MCCD | 8 | -13 | -55 | HUACHUC | 9- | -13 | -53 | | LEAVENWORTH | P | 71- |
| ų. | DIRECT | DC 1 | | ארן ז ז | 1 | -15 | HF C.T. | | a | 11 | | 1 6 | 1 9 | -15 | YAKT | | -13 | 17- | FORT | ~ | -13 | -25 | FORT | 1 | 10 | 52 | FORT | 5 | 6- | -13 | FIRET | 4 | Ŷ | -19 | | FORT | ì | 2 1 |
| | Ē | 301 | | - | 1 | 80 | | • | _ | • • | | - | 1 | 6- | | * | -10 | -16 | | 9- | 8 | +1- | | ٥ | 11 | 1 5 | | 9- | 5 | † | | -5 | -5 | 8 | | • | 2 | đ |
| | | A PP | • | 2 | -10 | -20 | 10 | 10 | 2 | 21 | | - v | -10 | -19 | - | -1 | -14 | -25 | 5 | 6 0 | -16 | -29 | 10 | 10 | 70 | 30 | 10 | 6- | -16 | 62- | 10 | -1 | -16 | -30 | | 2 | | -17 |
| | | JAR | 30007.00 | -7- | -15 | -26 | GG/POPE | 1 | - | 54 | 20 4 CC 100 B | 9- | | | 3404/99 | -11 | | -37 | PBELL | -10 | | 14- | PBELL | 14 | 28 | 4 | PRELL | | -23 | | PRELL | 8 | | -39 | | P8511 | | -24 |
| HE IGHT | Z | FEET | PACAL STAGE TACK | 5000 | 10000 | 18000 | FORT BRAGG/POPE | 2000 | 10000 | 1800 | FOOT BOA | | 10000 | 18000 | FOR T BEAGG/PUPE | 2000 | 10000 | 8 000 | FORT CAMPBELL | 2000 | 10000 | 18000 | FORT CAMPBELL | 2000 | 10000 | 18000 | FORT CAMPBELL | 2000 | 0000 | 00001 | FORT CAMPBELL | 2000 | 10001 | 18000 | | TISSAMUS LAGA | | |

*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES ANNUAL EQUIVALENT HEACHINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

THE BREING VERTOL COMPANY

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EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIFCLE AIR FOUTES

0210-10600-1

| Ann App. July Cart | HO LOFT | | | ľ | ш | 100 | VAL | E N T | H F A | 0 | CNI | \$\$ | | | | STAN | DARO | STANDARD DEVIATION | NO I |
|--|---|----------------------|--------------------|-----|-------------------|-------------------------|-------------------|--|----------------|-------------|-------|--|-------|-------------------|-------------------|----------|------|--------------------|--------------------------|
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| 10 - 12 - 13 - 13 - 13 - 15 - 25 - 25 15 11 11 12 12 12 15 14 15 15 16 16 | FORT CAM | PRELL -9 | ı | 1 | | . E | -12 | <u> </u> | œ | ď | 1 | • | ų | ٠ | | | - | | 1 |
| 10 | 1 0000 | -20 | | -18 | | -13 -25 | -32 | -36 | 30 | 2 5 | 3 | 12 | 212 | 2 2 | * 2 | 9 2 2 | 2 | 0 ~ P | |
| 1 | 5 | 198FLL -6 -18 | 5 2 E | | | -4 -12 | 6 6 | -10 | ~ 2 | 5 21 | m ~ | ~ • | ~ 2 | 7* | 7 15 | • 9 | | | H. |
| To FOPT SILL To FOPT SILL To FOPT SILL To FOPT SILL To FOPT WOLVERS To FOPT WOLVER | FORT CAM 5000 10000 | PAELL 0 | 170 0 2 4 | | | PUCKER 0 0 | | 8 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 | 31 -2 -7 | 23 | 4 001 | | 27 77 | 113 | -111 | # E # E | | | , E = 12 x 3 |
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| TC FROBISHER 1 0 3 4 2 -4 -5 -6 -13 -1 -4 -5 -4 -10 -11 9 9 10 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | FORT CAM 5 COO 1 O C CO 1 B C OO | PBELL -12 -24 -42 | -10 -17 -17 | | | WOLTER | | -19 | 38 | 91 22 | | 200 | ~ 75 | 0 m ~ | 7=4 | 13 | | 570 4 001 | <u> </u> |
| TO GEN HITCHELL 2 -1 0 0 0 -9 -11 15 14 10 4 -3 -1 -1 -9 -12 -14 -2 0 0 0 0 0 -9 -11 15 15 15 10 2 -6 -3 -6 -3 -6 -12 -14 -2 0 0 0 0 0 -1 -10 -13 15 15 15 TO HILL AFB TO HOMESTEAD AFB TO O O O O O O O O O O O O O O O O O O | FORT CAM 5000 10000 18000 | | 10 | | £ 4 6 4 | (ma) | 414 | 44. | -13 | 779 | | 597 | 157 | -10 -12 -20 | -11 -13 -22 | • 21 | 004 | 2.00 | £*** |
| 7 -5 -3 -5 -11 -13 | 5000 10000 18000 | PBELL -2 -4 -12 | C T C T | 015 | | — ,, | 1 - 12 | -12 -14 -25 | 079 | 007 | 000 | | | 61- | -113 | 15 22 22 | | 0 = 6 | 122 122 123 124 |
| TO HOMESTEAD AFB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 5000 10000 18000 | -20 -38 | -5 -13 -27 | | HILL -5 -12 | AFB -5 -13 -26 | -11-23 | -13 | 3 C E | 23 | E 8 3 | 4 17 27 27 27 27 27 27 27 27 27 27 27 27 27 | 12 22 | 7~= | 200 | •== | -000 | 50 | 2 |
| | FORT CAM 5000 10000 19000 | PBELL 0 4 8 | 20+01 | 000 | HOME 0 - + | 0 - 10 | 19 17 17 | 975 | | 1-1- | 007 | | 017 | - 27 - 2 | -8 -14 -26 | 129 | 229 | 3 | £.22 |

*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES ANYUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR FOUTES

| DEVIATION | 100 | | | # 6 T 7 | | N. M. 12 15 15 20 | N.MI. 12 14 21 | N. M. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10 | | 7. H. H. 11. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20 |
|--------------|---------------|---|------------------------------------|---|---------------------------------------|--|--------------------------------------|--|----------------------------------|---|
| DE VIL | JUL | 421 N | 5000 | \$ L & C | 1541 | 249 | 280 9 9 11 13 | 90 | 1232 | 01 |
| | A PR | 71 61 | 22.6 | 2 = 3 | 100 | 12 12 | 252 | 11 51 | - 632 | 212 |
| STANDAPD | JAN | 13 14 20 | 13 | # # 9 # 11 | 6 2 5 | 15 | 14 22 22 | 13 | 9112 | 13 |
| רוב אוא | A E S | - 16 -23 -35 | -13 -20 -34 | -1 -12 -23 | 0 + 6 | 7 = 4 | -19 | - 18 - 28 - 46 | 1 2 40 | -20 |
| CIFC | 475 | -14 -21 -35 | -11 -18 -31 | -10 -20 | 0 9 7 | 946 | -17 -26 -42 | -17 -26 -42 | 0 4 0 | -18 |
| 3 | ** 4 50 | -6 -11 -20 | 4 - 6 - 91 <u>-</u> | 0 6 | 5 12 21 | 13 | -15 -15 -25 | -10 | 4 11 20 | 91 - |
| S. FUR | ET UMN 3CT | | 644 | 074 | 6 13 23 | 100 | -11 -24 | -15 -29 | m 0 80 | -12 |
| N D | JUL. | 647 | 7 4 9 | | 460 | 9 ~ 7 | -13 -13 | -1 -12 -19 | 2 2 2 | -12 |
| N I M C | APF | -7 -15 -27 | -5 -12 -23 | -15 | 9 1 6 | 6 19 92 | -8 -11 -27 | -8 -16 -26 | 4 115 27 | -11 -21 |
| H E A D W | NA C | -9 -19 -34 | -15 -15 -28 | 91- | 19 30 | 112 24 40 | -12 -24 -43 | -13 -25 -43 | 6 19 34 | -15 |
| E N T | 485 | 170 | 246 | 0° 60° 60° | -14 -22 -39 | -20 -29 -48 | 6 0 2 | 046 | -13 -23 -41 | 0 % 0 |
| 7] | 475 | 206 | 170 | 799 | -12 -21 -36 | -16 -27 -43 | 7 2 5 | - 9 0 | -12 -21 -37 | 1 2 |
| OUIV. | ** A50 | R AAF 4 8 14 | SONVILLE 3 5 9 | HEST -1 | IN AFB -14 -25 | E POCK 19 -15 -25 | 6 CURNE 6 12 18 | 16 AFB 14 21 | AFB -6 -13 -24 | RE AFB 9 17 26 |
| | ECT 0CT | HUNTE 3 5 13 | JACKS | KEY N | LAR SJN -7 -13 -26 | -11 -11 -23 | 1.8 | LORING 9 13 23 | LUKE -4 -10 -20 | MCGUI a 111 25 |
| | JUL OCT | w4r | 2 2 2 | 777 | 4 6 1 1 6 9 1 | 91.6 | 28 11 | 111 | -11 | 9 7 9 |
| E COI VALENT | APA | 12 21 21 | 4 6 5 1 | 10 2 7 | TC -6-12-23 | 10 -10 -18 -31 | 10 14 19 | 10 13 19 | 10 -16 -30 | 10 20 27 |
| | JAN | 198ELL 15 15 22 | AMPRELL 4 4 10 14 | IPRELL -2 3 | 6 - 5 | m • n | PRE LL 11 21 33 | 11 21 21 34 | -00 | IPRELL 14 28 24 |
| HE LGHT | FFET | FIRT CAMPBELL 5000 10000 18000 | FORT CAM 5000 10000 18000 | FORT CAMPRELL 5000 10000 18000 | FORT CAMPBELL 5CC0 -21CC00 -21S000 -3 | FORT CAMPBELL 5C00 -1 19C00 -2 18C00 -4 | FNPT CAMPRELL 5000 1 10000 2 18000 3 | FORT CAMPBELL 5C00 1 1 1 0C00 2 1 1 BC00 3 | FTRT CAMPRELL 50002 100002 | FORT CAMPRELL 5CC0 1 10C00 2 18C00 4 |

*HEADMINDS--COMPUTED FOP A 120-KT AIRSPEED. *** A--DENOTES ANNUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT PELIABILITIES. *** A--DENOTES HEADMINDS.

THE ROLLING VERTOL COMPANY

of to

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| STANDAPD DEVIATION | JUL OCT | 155 N.MI. | 21 01 | 11 15 | 1201 N.MI. | • | | | 10 12 | | | 923 N. MI. | 10 | | 1324 N.MI. | •• | 2 | 543 N.BI. | | 22 | | | • • | : | 551 N.MI. | :: | | 1543 N.HI. | • | - = |
|--------------------|---------|---------------|------------|-----------|---------------|------------|-------|---------------|-----------------|-------------------|---------------|------------|-------|-------|-----------------------|------------|------------|---------------|----------|------------|---------------|---------------|-------------|---------------|-----------|------|----------|---------------|--------|-------|
| STANDAP | JAN APP | | | 23 22 | | • | 6 4 | | 14 13 | 21 20 | | 21 21 | - | 16 18 | V2.04 | 6 01 | 115 | | Sec | 2 | | 13 13 | * : :: 2 | | : | 5 | 21 21 | | • | 01 |
| | A 85 | | ۳ c | o ~ | | | 7 - | | 9- | 11 | | -3 | - | ~ | | 7 ~ | • | | -20 | -32 | | -5 | 5-1- | 1 | | -28 | -45 | | ~ | · • |
| | 475 | | 7- | - 4 | | 7 | ۰- | | * | 77 | | 7 | m | • | • | 0 K | = | | = | -29 | | † | M 60 |) | -16 | -25 | 3 | | ۰, | • = |
| | ** A 50 | | - د | :: | | 4 | ه ۸ | | • | 9 <u>9</u> | | • | = | 2 | • | ' = | 21 | | 01- | - 18 | | m | * ~ | ı | - | -15 | - 25 | | * 5 | 2 2 |
| 5. | 200 | 7 | 4 a | 91 | | - 1 | 9 | | • | 9 21 | | 1 | =: | 8 | • | 2 | 10 | | • | -12 | | | N M | | -1 | -11 | -25 | | ~ 0 | 11 |
| 2 | ع ال | • | s d | ~ | | m | 77 | | ~ | v^ ∞ | | M | • | 13 | 1 | • ~ | 13 | | 9 | 91- | | m (| • 7 | | -5 | -10 | +1- | | 4 4 | 75 |
| 2 | APR | | × <u>~</u> | 21 | | ~ 0 | ° = | | * | - 02 | | 8 | 2 : | 15 | u | 13 | 52 | | 07- | -31 | | • | n 4 | | - | 91- | -24 | | ر د | 25 |
| ¥ L | NAL | : | 17 | 35 | | ~ : | 81 | | • | 12 | | • | 92 | 77 | | 2 | 33 | | 1. | \$ \$ | | • | • = | | -12 | -24 | | , | • • | 35 |
| - Z | A85 | 9 | -28 | 45 | | -12 | -26 | | -16 | -27 -36 | | -17 | -24 | -36 | -12 | -22 | 9 | | ۰. | • | | 91 - | -29 | | -5 | 0 | 7 | (| -12 | -39 |
| A | 475 | | -22 | 14- | | 77 | -24 | _ | - 14 | -32 | | -15 | -22 | 5 | = | 2 | -37 | AND | - 4 | 21 | | -12 | -25 | <u> </u> | | 7 | S | ; | ? ? | -35 |
| 7 | ** A50 | S | -14 | -23 | CO CLTY | ۲ <u>۱</u> | -11 | -ST PAUL | 5-1 | 61- | AFB | | -14 | 67- | S AFB | -13 | +2- | CUMBERL | • • | \$2 | ORLEANS | 47 | -10 | RA FAL | • | 71 | 11 | • | -12 | -23 |
| " | 5 | HENDH! | 9- | -51 | - | 7 7 | 6 | MINZ | ر د | -20 | TON IM | 9 | -13 | * 7 | NELLI -3 | 9 | 77- | _ | . | 52 | _ | 77 | 6 | NI AGA | - | 2: | 8 | CXNAPD | 01- | -20 |
| DIRE | 됩 | ľ | 9 | 60 | | ? ? | - | | 7 4 | -15 | | 4 | 6-1- | | 1 | 7: | -13 | • | • = | 12 | | 77 | | | • | • | 71 | | P | -13 |
| | APP | 10 | -16 | -28 | 10 | 90 O | -11 | 10 | 5-1- | -18 | 10 | 9 (| -12 | 17 | 10 | 51- | 87- | 10 | • | 52 | 10 | 4 6 | +1- | 10 | • | 71 | 2 | 10 | -14 | |
| | 744 | MPRE LL | -24 | -45 | | -12 | -25 | 4PBE LL | 80 kr | -28 | IPPELL | | -19 | J | 1PBELL | | 251 | PRELL | 27 | £ 3 | IPBE LL | -13 | | PBELL | 2 | 61 | 97 | PBELL | | -37 |
| 2 2 | FEET | FORT CAMPRELL | 00001 | 18000 | FORT CAMPBELL | 10000 | 18000 | FORT CAMPBELL | 10000 | 18000 | FORT CAMPRELL | 5000 | 18000 | | FORT CAMPBELL SCOO | 10000 | 00001 | FOFT CAMPBELL | 000001 | 18000 | FORT CAMPBELL | 2000 10000 | 18000 | FORT CAMPBELL | 2000 | 0000 | 300 | FORT CAMPBELL | 10000 | 18000 |

*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEFD. **A--DENGTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. Minus sign dengtes headwinds.

EQUIVALENT HEADWINDS AND STANDAPD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR ROUTES

| IN FEET JAN | APR | | DIRECT JL ncT | ** A50 | 475 | 485 | JAN | APR | - 60 | FETURN OCT | **A 50 | A75 | A 85 | JAN | APR | JUL | OCT |
|----------------|-----|------------|------------------|---------|------|-----|------|-----|------|---------------|--------|------|--------|----------|-----|-----------|-------|
| FOPT CAMPRELL | 1 | | PATPI | CK AFB | | | | | | | | | | | | 1 419 | N. M. |
| 2000 | 7 | - | | | -5 | -1 | -3 | -3 | 7 | -2 | -3 | -10 | 11- | 77 | 11 | • | |
| | | - | 7 | * | ũ | 5- | -12 | 97- | 7 | ۳ | 9 | -15 | -17 | 6 | 77 | • | 12 |
| 18000 12 | 13 | • | 2 | 60 | 7 | * | -25 | -21 | 1 | -15 | -14 | -28 | -31 | 2 | 2 | 2 | 2 |
| FORT CAMPBELL | 10 | | PITTS | BURGH | | | | | | | | | | | | 412 N | . H. |
| 5000 12 | | 5 | 1 | 1 | 0 | ~- | -13 | 6- | -5 | 1- | 6- | -17 | -19 | 1 | 13 | • | |
| | 1 | 10 | 10 | 14 | 4 | 2 | -27 | 91- | 01- | 1- | 91 - | -27 | -30 | 15 | 15 | 1 | * |
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| FORT CAMPAFLL | 10 | | REGIN | 4 | | | | | | | | | | | | 110a | |
| 2000 -10 | ١ | *- | 90 | - | -15 | -16 | • | 5 | • | _ | • | 7 | -2 | | • | } | |
| | , | 6- | -13 | 71- | -21 | -23 | 9 | 10 | 00 | 11 | 1 | M | , ~ | | 12 | • | |
| | | -16 | -24 | -23 | -34 | -37 | 22 | 15 | 13 | 61 | 16 | • | | 17 | 16 | = | 91 |
| FORT CAMPBELL | 10 | | SCOTT | AFB | | | | | | | | | | | | 163 N | , H |
| 5000 - 10 | 1 | * | 9 | | -16 | -18 | • | • | 4 | S | ~ | -2 | -5 | 15 | *1 | 2 | 1 |
| | | 9- | 07- | -13 | -24 | -26 | 91 | 12 | • | 80 | 2 | 0 | -5 | 15 | 91 | 12 | 15 |
| 18000 -36 | -26 | -15 | -22 | -23 | -39 | -43 | 23 | 19 | ct | 11 | 16 | M | 0 | 23 | 22 | 13 | 22 |
| FORT CAMPRELL | 10 | | SELFE | IDGE AF | 8 | | | | | | | | | | | 416 M | 1 |
| 9 0005 | | m | | | - | -5 | • | -5 | 1 | -5 | 9- | -14 | -16 | _ | - | • | |
| - | | • | ~ | er. | 7 | 'n | - 18 | -12 | - | 0 | - 12 | -21 | -24 | 2 | 2 | = | 1 |
| | en | _ | CI | • | -7 | φ | -33 | -18 | -10 | -19 | 61 - | -34 | -38 | 22 | 2 | - | 21 |
| | | | | | | | | | | | | | čl. | | | | } |
| AMPBEL | | | SHAM | AFR | | | | | | | | | | | | 379 N | .MI. |
| | | S | ~ | _ | 0 | -5 | -13 | 6- | -5 | 5- | 9 | 91- | -18 | 13 | 12 | • | 11 |
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*HEADMINDS--COMPUTED FOR A 120-KT AFFSPEED. **A-DENDTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT PELIABILITIES. MINUS SIGN DENDTES HEADWINDS.

FOULVALENT MEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE ALS ROLLTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. **A--DENOTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

MEET 14

FOULVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR ROUTES

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EQUIVALENT HEADWINDS AND STANDAFD DEVIATION IN COUTS FOR GREAT CIRCLE AIR FOUTES

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EQUIVALENT HEADMINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR ROUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIRSPEED. *** A-DENOTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT PELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

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EQUIVALENT HEAD AND STANDAPU DEVIATION IN KNOTS FOR GREAT CIFCLE AIR FOUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIPSPEED. **A--DENDTES ANNUAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES. MINUS SIGN DENOTES HEADWINDS.

FOULVALENT HEADMINDS AND STANDAPL DEVIATION IN KNOTS FOR GREAT CIPCLE ALP POUTES

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CONTVALENT HEADWINDS AND STANDAND DEVIATION IN KARTS FOR CREAT CIFCLE AIR POUTES

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PPERDUINGS--COMPUTED FOR A 1.00-KT AIRS PREFO.

***-DEVOTES ANYWAL FOULVALENT HEADWINDS FOR INDICATED PER CENT PELIABILITIES.

***-PINUS SIGN DEWITES HEADWINDS.

ESCIVALENT ATTENTION AND TANDALD DEVIATION IN COURS FOR SPEAT CIPCLE AT BOUTES

| an 1 5 m | | | | | : | | | ŀ | | | | | | | | ł | ł | 1 |
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SHEEF 172

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SHEEF 173

FOULVALENT MEADINGS AND STANDARD DEVIATION IN ANDTS FOR GREAT CIFCLE AIR ROUTES

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*** PENDITS NYMBEL BOUTVALENT HEADAINTS FOR INDICATED PER CENT BELIAFILITIES.

SAFET 174

FURINGENT MESSMINDS AND STANCARD DEVIATION IN CALLS FOR GREAT CIPCLE AIR ROUTES

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EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNUTS FOR CREAT CIPCLE AIP POUTES

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SMEET 192

EQUIVALENT HEADLINGS AND STANDARD DEVIATION IN NUCTS FOR GREAT CIRCLE AIR POUTES

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SHEET 194

EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN NUITS FUR CREAT CIPCLE AIR ROUTES

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** A -- DESCRIPES AROUND FOUR VALENT HEADERINDS FOR INDICATED PER CENT RELIABILITIES.

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** DENOTES ANNUAL COM VALENT NEADMINDS FOR INDICATED PER CENT PEL TABILITIES.

SHEET 190

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COULVALENT HEAD-INDS AND STANDARD DEVIATION IN ANDTS FOR CREAT CIRCLE AIR POUTES

| F 101 | | | j | | CUIVALERT PEABUINDS | 3 | | 4 | 4 | 7 | 9 | | | 12,100 | Stepen | TAR SEVIATION | |
|--|--|------|-----|-----------|---------------------|-------|-----|-----|-----|-----|------|-------|-----|--------|--------|--|--------------|
| 132 | 4 | Ę | 5 | 1 20 1 | 9572 | 2 | ş | 3 | Ş | ŧ | 22 | 8 900 | 473 | 18 | 4 | 5 | 5 |
| 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | -24 | 22 | *22 | }~=2 | **=# | ••2 | 700 | 755 | TRA | TR | tää | täů | 724 | 774 | ••3 | | j2 |
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| \$500 \$700 \$700 \$700 \$700 | *77 | 2000 | •• | 3777 | \$ no 7 | 752 | tra | 177 | 777 | 071 | 717 | 777 | 777 | tşş | *22 | 5 | i |
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MEADMINDS--COMPUTED FOR A 120-KT AIPSPEED. *A--DENOTES ANNUAL EQUIVALENT MEADMINDS FOR INDICATED PER CENT PELIABILITIES. **INUS SIGN DENOTES MEADMINDS.

| STAMPARE DEVIATION | | 228 | 222 | 322 | 7 | 222 | 322 | | | |
|--------------------|------------|--|---------------------------------------|---------------------------------------|--|--|---------------------------------------|--|--|---|
| 2 | 4 | 228 | 211 | 222 | ••• | 222 | 212 | 322 | -22 | 325 |
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| | . 4 | 17.5 | 776 | 4016 | -19 | 92 | m 4 4 | 177 | 119 | 0.40 |
| | | UCKE | FORT PUCKER 5000 10000 19000 | FRET SUCKE- 5000 10000 18000 | FORT RUCKES SCGO 10000 18000 | FORT PUCKEY 5000 1 0000 18000 | FORT RUCKES 5000 10000 18000 | FOET FUCKES 5000 10000 18000 | FORT PACKED 5CCO 10CCO 18COO | FORT FUCKES 5C0 10C00 16C00 |
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*** DENOTES ANNUAL EQUIVALENT MEACHIVIS FOF INCICATED PEF CENT PELLASILITIES. MINUS SIGN DENOTES MEADAINDS.

SPEET 154

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THE ROEING VER-TOL COMPANY

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| 19000 | 5.2 | * | • | 12 | 13 | ~ | • | Ä | -25 | 7 | 2 | 77 | į | 63 | 32 | 32 | 33 |
| FORT BUCKER | 9.4 | 10 | | MELL | OFI FANC | | | | | | | | | | | 00000 | |
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| 18000 | -38 | -30 | 0 | - | -21 | -38 | 7 | 25 | 2 | • • | •= | 33 | - ^ | • | 32 | 22 | 32 • 9 |
| FORT FUCKER | Fo | 10 | | MI AGA | PA FALLS | 9 | | | | | | | | | } | · | <u>;</u> |
| 2000 | 5 | • | 7 | 3 | t | 7 | í | - | • | 7 | • | | | • | | 5 | i i |
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*** DENOTES ANY LAL EQUIVALENT HEADWINDS FOR INDICATED PER CENT RELIABILITIES.
HINUS SIGN DENOTES HEADWINDS.

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| STANDAR | 4 | | | | | | | | 22 | | 3 | | | | | | <u> </u> | | | | 22 | | | 23 | 12 12 | | | | | : | | | | 2 | | | D (|
| *45 | 83 | | - | | 3 | | 48.0 | | * | | | 3 | >~ | | | . 1 | 7 | | | 7 | ÷* | } | | | ÇŞ | | | 2 | 23 | | | -11 | -15 | * | 127 | ? | |
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| | 2 4 | 1 | | = ; | \$ | | • | • | = | | 6- | | -59 | | • | | -23 | | • | 1 7 | - | | = | 2 | 33 | | • | 11 | 59 | | - | ٠ 6 | 7 | • | | • (| •1- |
| | | UCKER | | | | UCKEP | | | | JCKER | | | • | CKEP | | | | KKEP | | | | FUCKE | | | | CKER | | | | CKER | | | | | CKE | | • |
| HE I GHT | FEET | FUPT PUCKER | 2000 | | | FORT AUCKER | 2000 | 10000 | 955 | FART FUCKER | 400° | 1000 | 18000 | FOET AUCKER | 200 | 12000 | 18000 | FORT PUCKER | 2000 | 10000 | 19000 | FORT P. | 2000 | 1000 | 3000 | FORT PICKER | 2000 | 10000 | 1000 | CORT BUCKE | 2000 | 10000 | 18000 | | FORT AUCKER | 2000 | 00001 |

OMEADMINDS--COMPUTED FOR A 120-KT AIPSPEED.

OOA--DENOTES AMUAL EQUIVALENT MEADMINDS FOR INDICATED PEP CFUT FELIABILITIES.

HINUS SIGN JENOTES HEADMINDS.

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EQUIVALENT HEADHINGS AND STANDAFD DEVIATION IN EVOITS FUR CREAT CIPCLE AIR DOUTES

| FIGHT | | | | u. | 7 1 7 7 | 1 | E N T | 4 3 4 | 20 | 0 24 | 3 | | | | 278 | 3 | EVIATIO |
|-------------------------------------|--------------|---|---------|---------------------|--|------------|-------------|--------------|-------|------|-----|--------|-----|-----|-----|------------|----------------|
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| 5000 10000 18000 | 255 | £ • 5 • | 0 | # S = 7 | MITCHFL 6 9 | 7-6 | 500 | TPA | 777 | 777 | 777 | 727 | 224 | 743 | 228 | 222 | \$-22 \$=22 |
| 5000 10000 18000 | -115 -15 | 1001 | -17 | 11062 | AFB 0-10-10-21 | 177 | -1-19 | | 000 | 700 | 000 | ••• | *** | ren | *28 | -22 | 2 |
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| 5000 10000 18000 | L 9 22 37 37 | 20 5 6 2 | n41- | 1 × 0 0 1 | TEP AAF | 0 10 0 | 7 | 987 | 177 | *** | *** | TAK | 223 | *** | 325 | === | ž |
| 5000 10000 18000 | 242 | F - 3 8 | 400 | 100 | SVILLE 13 13 22 | 040 | 7-4 | 724 | 222 | 177 | 177 | täż | 757 | 222 | 222 | 222 | 6-55 |
| 500 SILL 5000 10000 10000 | 100 | 10 10 28 | - M M W | ğ | KS CNVILLE 10 19 | 7~~ | 70 + | វ ក្ក | 777 | 777 | *** | tää | 777 | 222 | === | === | 3 |
| 5000 10000 18000 | 10112 | 102 | 070 | £-45 | MEST O | 57- | 460 | 755 | 775 | 0=0 | 717 | 774 | 758 | TAR | 222 | 222 | |
| 5C30 10C03 18C00 | -16 | 1- 1- 1-20 | 017 | LAF S | SUN 168 | 977 | 110 | -22 | 0 = 5 | 749 | | 0 - 2 | 1-0 | ••• | •25 | 2 2 | |
| FC6T SILL 5C00 13C00 18C00 | 1 23 68 39 | 30 | -40 | F 995 | 12 13 11 21 21 21 21 21 21 21 21 21 21 21 21 | 040 | ^ -∞ | 277 | 245 | 753 | *== | 755 | 757 | | 218 | 212 | |

**A.—DEMOTES ANNUAL EQUIVALENT HEADWINDS FOR IMPICATED PER CENT GELIABILITIES.
*INUS SIGN DENOTES MEADWINDS.

EQUIVALENT HEADAINDS AND STANDALD DEVIATION IN KNUTS FOR GPEAT CINCLE AIP POUTES

| HE ICHT | | | | | CULVALENT | 1 | - 4 | MEADWIND Se | 2 | 1 % 0 | 3 | | | | 276 | 3 | Standard Revisting |
|-------------------------------------|------------|--|-------|-------------------------|-------------------------|-----|---------|-------------|-------|-------|-----|---------|------|-----|-----|------|--------------------|
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| 5000 10000 18000 | = 22 | 2 6 7 2 8 | 7 | 100 kg | BCUFNE B 14 22 | -20 | 0 10 10 | 724 | 222 | 797 | 777 | 7 5 5 | 583 | | 222 | 222 | -2: |
| 5000 10000 10000 | 17% | 2 2 | -== | 25.25 | NG AFB | 22 | 0 % 0 | 777 | 177 | 777 | 157 | 228 | *** | 747 | 221 | -2== | |
| F3PT SILL 5C00 13C00 19C00 | -17 | 177 | 745 | 1045 13 | 46.3 -11 -21 | TAR | 17- | ~ 2 % | 2 5 5 | N 4 6 | 0 | 3 | 946 | 100 | 222 | *25 | ••• |
| 5000 10000 18000 | 13 | 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | -01 | MCGUI 7 111 23 | AF AFB | 225 | 042 | *** | 222 | 725 | 777 | 225 | 777 | 227 | =32 | -=== | · · · · |
| 500 STELL 5000 100000 18000 | 24 40 | 30 40 | ~~0 | # 900 T | H15 7 | 042 | ~ - · | 52- | 177 | 777 | 178 | 122 | 553 | 223 | 212 | 222 | -2= |
| FORT STLL 5000 10000 18000 | 797 | 5851 | 755 | 3112 | 5719 | 791 | 177 | 444 | • • • | | | | 945 | 777 | 2*1 | ••3 | |
| 5000 10000 18000 | | 4 2 2 4 | W m 4 | 12 | ST PAUL | ተየተ | 777 | îtț | 195 | 217 | 711 | 117 | 717 | 725 | 222 | 222 | · := |
| 5000 10000 18000 | 400 | 5-146 | -71 | 14 -17 -17 -12 -12 | 100 | 947 | 777 | | 0 4 4 | 70- | M++ | 0 N N | 111 | 77= | 222 | 222 | |
| 5000 10000 19000 | -16 -34 | 12. 13. | 957 | NELLE -19 -16 | \$777 \$ | 798 | 722 | ~22 | ~22 | 9.2 | ••• | 0+9 | *** | *** | *22 | *22 | 3 |

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EQUIVALENT HEABAINDS AND STANDARD DEVIATION IN KNOTS FOF CHEAT CINCLE AIR POUTES

| FORT SILL 10 MEW SCOOL 12 9 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | | | | | | | | | | |
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| SILL 25 13 11 25 14 15 15 15 15 15 15 15 15 15 15 15 15 15 | • | 1 | -13 | -10 | ~ | 7 | 9 | | - | = | | į |
| SILL 27 13 11 27 13 15 15 15 15 15 15 15 15 15 15 15 15 15 | 15 | ~ | -27 | 2- | 21- | | -11 | -20 -20 | <u> </u> | 2 | • | |
| SILL 5 3 10 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | 23 | . 21 | 19- | -31 | * | -26 | 2 | | _ | | 2 | |
| SILL 10 2 2 14 SILL 13 -2 14 SILL 15 -3 -2 14 SILL 2 | DRLEAMS | | | | | | | | | | 1 | |
| SIL 11 10 2 14 2 14 2 14 2 14 2 14 2 14 2 1 | 2 | 1 | 1 | 1 | 7 | 4 | - | | | | | H |
| SILL 10 22 22 22 22 22 22 22 22 22 22 22 22 22 | . ~ | • | -17 | -12 | • • | - | | | | 12 | • | |
| SILL 10 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | = | . 0 | -33 | -27 | ~ | -11 | | ** | - | 12 | 2 | 15 |
| STIL -3 -3 -2 14 -15 -12 -4 -15 -12 -4 -15 -12 -4 -15 -12 -4 -15 -12 -4 -16 -13 -2 -17 -10 -2 -17 -2 -2 -18 -2 -2 -2 -3 -3 -3 -3 -3 -3 -3 -3 -3 -3 -3 -3 -3 | SAPA SALIS | | | | | | | | _ | | | |
| SILL -3 -3 -2 -14 -15 -15 -16 -17 -11 -17 -17 -17 -17 -17 -17 -17 -17 | | - | -12 | • | - | 4 | • | -14 -10 | 13 | | - | |
| SILL -3 -3 -2 -14 -15 -15 -14 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15 | 13 | | -25 | -1. | -10 | - | 2 | 25 -27 | 12 | 2 | • | 1 |
| SILL -3 -3 -2 -2 -4 -2 -4 -2 -4 -2 -4 -2 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 | 7 | 2 | -42 | -28 | - | -25 | 2.2 | \$- 07- | != | != | . 2 | 15 |
| SILL 5 -3 -2 -11 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 | AED AER | | | | | | | | | | | |
| SILL 5 -12 -4 -33 -27 -11 -33 -27 -11 -30 26 4 -5 -2 13 -5 -2 13 -5 -2 -2 13 | | 7 | • | * | • | c | | 4 | | • | ! | |
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EQUIVALENT HEADMINDS AND STANDAFD DEVIATION IN KNOTS FOR GREAT TINCLE AIR ROUTES

| | SILL 11 9 6 5 4 7 7 0 -1 12 10 -6 -5 19 -16 -16 -16 -16 -16 -16 -16 -16 -16 -16 | SILL 10 SHALARS AND AND AND AND AND AND AND AND AND AND | | | | | * | | , | | 1 | | 2 | | | | | V | | | |
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| Single S | SILL -1 -1 -0 -0 -1 -1 -1 -0 -0 -10 -2 -2 -2 -10 -17 -18 -10 -2 -2 -2 -10 -17 -18 -10 -2 -1 -2 -2 -10 -17 -18 -11 -6 -1 -2 -10 -3 -10 -12 -6 -5 -10 -9 -14 -16 -12 -6 -5 -10 -9 -14 -16 -13 -6 -14 -23 -25 -14 -9 -2 -10 -9 -14 -16 -15 -11 -6 -14 -23 -25 -17 -12 -7 -6 -6 -14 -18 -10 -14 -23 -25 -19 -19 -19 -10 -14 -9 -2 -1 -3 -10 -14 -9 -2 -1 -3 -10 -14 -9 -2 -1 -19 -10 -14 -9 -2 -1 -19 -10 -14 -9 -2 -1 -19 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10 -1 | | | | - | | VAKI | 7 2 | | | | | | | | | | | • | | i |
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| 760 Man Trees 7 TO GEN MITCMELL 760 Man Town TCMELL 760 Man Town TCMELL 760 Man Man TCMELL 760 Man Man TCMELL 760 Man Man TCMELL 760 Man Man TCMELL 760 Man Man TCMELL 760 Man Man TCMELL 760 Man Man TCMELL 760 Man Man Man Man Man Man Man Man Man Man | MOLTEFS TO GEN MITCHELL 13 10 6 7 8 0 -1 -3 -9 -7 -7 -5 -7 -15 20 14 0 9 12 1 -1 -3 -22 -10 -16 -19 -33 MOLTEFS TO MILL AFR -14 -9 -2 -7 -8 -16 -18 13 8 2 7 7 -14 -9 -2 -7 -8 -16 -18 13 8 2 7 7 -30 -23 -8 -18 -19 -32 -35 24 18 7 15 14 4 MOLTEPS TO MOMESTEAD AFB 2 3 0 1 -4 -5 -1 -3 -3 0 -2 -2 -8 22 23 0 1 | GEN MITCHELL GE | 19000 | -21 | 7 | Ŧ | -16 | *1 - | -23 | -25 | 12 | ٥ | • | 01 | ~ | • 0 | 7 | 13 | 2 | • • | - 2 |
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EQUIVALENT HEADMINDS AND STANDARD DEVIATION IN KINTS FOR GREAT CIPCLE AIR POUTES

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EQUIVALENT HEADMINDS AND STANDARD DEVIATION IN KNUTS FOR GFEAT CIFCLE AIR POLITES

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MANUEL SIGN DE VOTES MEADWINDS FOR INDICATED PER CENT PELIARILITIES.

SHEET 212

THE BOETNG VERTOR COMPANY

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FOULYALENT HEADMINDS AND STANDARD DEVIATION IN KNOTS FOR CREAT CIRCLE AIP ROUTES

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** OPERADMINDS--CONFUTED FOR A 120-KT AIRSPEED.

*** OPERADMES AWMAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT PFLIABILITIES.

*** NIMUS SIGN DENOTES HEADMINDS.

SHEET 213

EQUIVALENT HEADMINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR ROUTES

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SHEET 214

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SHEET 216

THE BOEING VERTOL CUMPANY

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EQUIVALENT HEADHIMS AND STANDARD DEVIATION IN KNOTS FOR CREAT CIPCLE AIR ROUTES

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*HEADMINDS--COMPUTED FOR A 120-KT AIPSPEED. **A--DEMOTES ANNUAL FULVALENT MEADMINDS FOR INFLIGED PEP CENT PELIAMILITIES. MINUS SIGN DEWOTES HEADMINDS.

THE REETING VERTOL COMPANY

FOULVALENT HEADMINDS AND STANDARD DEVIATION IN KNOTS FOR CREAT CIECUE

0210-10600-1

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THE BUELOG VERTOL COMPANY

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THE ROETNG VEPTOL COMPANY

EQUIVALENT HEADMINDS AND STANDARD CEVIATION IN KNOTS FOR CAPAT CIFCLE ALP POUTES

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*HEADMINDS--COMPUTED FOR A 120-KT ALSPEED. **A--DENOTES ANNUAL FOULVALENT HEADMINDS FOR INDICATEC PER CENT RELIABILITIES. **INUS SIGN DEMOTES HEADMINDS.

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FOUTVALENT HEADWINDS AND STANDAFD DEVIATION IN KNOTS FOR GREAT CIFCLE AIR ROUTES

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OMEADUINOS--COMPUTED FOR A 120-KT AIRSPEED.
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EQUIVALENT HEADWINDS AND STANDARD DEVIATION IN KNOTS FOR CREAT CIRCLE AIR FOUTES

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*MEADMINDS--COMPUTED FOR A 120-KT ATRSPEED. *** -- DENDTES ANNUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT RELIARILITIES. **** MINUS SIGN DENDTES HEADMINDS.

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EQUIVALENT HEARINGS AND STANDARD DEVIATION IN KNUTS FILE CREAT CIPCLE AIR SOUTES

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SHEET 242

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THE BOETHG VERTOL COMPANY

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SHEET 244

THE BREING VEFTUL COMPANY

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FOULVALENT HEADMINDS, AND STANDARD DEVIATION IN KNOTS FOR GREAT CIPCLE AIR FOUTES

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FOULTALENT HEADMINDS AND STANDARD DEVIATION IN KIOTS FOR CREAT CIFCLE AIR POUTES

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*HEADMINDS--COMPUTED FOR A 120-KT AIPS PEED. **A--DENGTES ANNUAL EQUIVALENT PFADMINDS FOR INDICATED PER CENT RELIABILITIES. *IMUS STOWN DENGTES HEADWINDS.

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PA-DENOTES ANNUAL EQUIVALENT HEADNINDS FOR INDICATED PEP CENT BELIABILITIES.

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**A-DENGTES ANYUAL EQUIVALENT HEADMINDS FOR INDICATED PER CENT RELIABILITIES.

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THE BOETHG VERTOL COMPANY

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EQUIVALENT HEADMINDS AND STANDARD DEVIATION IN CHOTS

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FGUIVALENT MEADAINDS AND STANDAFD CEVIATION IN KNOTS FOF CREAT CIPCLE AIR HOUTES

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***--DENOTES ANNUAL EQUIVALENT HEADMINGS FOR PROJECTED PER CENT RELIABILITIES.

| EQUIVALENT HEADHINDS AND STANDAFD DEVIATION IN KINTS FUP GPEAT CIPCLE ALE EMITES | |
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| QUIVALENT MEANINDS AND STANDARD DEVIATION IN KINTS FUR | GPEAT |
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EQUIVALENT HEADMINDS AND STANDARD DEVIATION IN KNOTS FOR GREAT CIRCLE ARE ROUTES

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FOULVALENT HEADHINDS AND STANDAFD DEVIATION IN KNOTS FOR GREAT CIRCLE AIR FOUTES

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SHEET 264

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FOUTUALITY HEADAFUS AND STANDARD DEVIATION IN COURS FOR GREAT CIFCLE AIR POUTES

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*HEADWINDS--COMPUTED FOR A 120-KT AIPSPEED. **A--DENITES ANNUAL EQUIVALENT MEADWINDS FOR INDICATED PEP CENT PELIARILITIES. Minus sign ofnotes Headwinds.

FOUTVALENT HEAD-INDS AND STANDARD DEVIATION IN KNOTS FOR GREAT

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EQUIVALENT HEADMINDS AND STANDARD DEVIATION IN KNOTS FOR GARAT

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*HEADMINDS--COMPUTED FOR A 120-KT AIRS PEED. *
**A--DENOTES AMNUAL EQUIVALENT MEADWINDS FOR INDICATED PER CENT RELIABILITIES.
#INUS SIGN DENOTES MEADWINDS.

| | LATITUDE | LONGITUDE | ELEVATION |
|---------------------|------------------|-------------------|-----------|
| | DEG MIN | DEG MIN | FT |
| ABADAN | 30 22N | 48 15E | 10 |
| AUAK NS | 51 53N | 176 39W | 17 |
| ADELATOE | 34 575 | 138 32E | 12 |
| ADEN | 12 50N | 45 2E | 10 |
| ALAMEDA NAS | 37 47N | 122 3W | 29 |
| ALERT | 83 29N | 62 17W | 190 |
| ANDERSON AFB | 13 35N | 144 55E | 580 |
| ANDREWS AFB | 38 49N | 76 51W | 353 |
| ATTU | 52 50N | 173 11E | 4() |
| BAGHDAD | 33 19N | 44 22E | 110 |
| BANGKOK | 13 55N | 100 37E | 10 |
| 9012E | 43 34N | 116 14W | 2858 |
| вомвау | 19 5N | 72 52E | 30 |
| BRISBANE | 27 385 | 152 43E | 86 |
| CALCUTTA | 22 39N | 88 27E | 10 |
| CANNON AFB | 34 23N | 103 19w | 4301 |
| CARSWELL AFB | 32 46N | 97 27W | 617 |
| CHERRY PT MCAS | 34 54N | 76 53W | 29 |
| CHICAGO | 41 59N | 87 54W | 667 |
| CHITOSE AB | 42 48N | 141 39E | 92 |
| CHURCHILL | 58 45N | 94 4W | 96 |
| CLARK AFB | 15 11N | 120 33E | 475 |
| CULOMBO COOKTOWN | 6 54N | 79 52E | 24 |
| CORPUS CHRISTI | 15 28S 27 42N | 145 14E 97 17W | 10 20 |
| CURPUS CHRISTI | 21 42N | 91 IIW | 20 |
| DA NANG | 16 2N | 108 12E | 30 |
| DARWIN | 12 285 | 130 55E | 20 |
| DAVAG | 7 411 | 125 36E | 19 |
| DHAHRAN | 26 17N | 50 10E | 78 |
| DIEGO GARCIA | 7 215 | 72 29E | 4 |
| DJAKARTA | 6 48 | 106 51E | 10 |
| DOVER AFB | 39 8N | 75 28W | 27 |
| DUTCH HARBOR | 53 54N | 166 32W | 12 |
| EDMONTON | 53 34N | 113 31W | 2214 |
| EGLIN AFB | 30 29N | 86 31W | 5 |
| EIELSON AFB | 64 39N | 147 4W | 544 |
| ELLINGTON AFB | 29 36N | 95 10W | 3 |
| ELLSWORTH AFB | 44 49N | 103 6W | 3276 |
| ELMENDORF AFB | 61 15N | 149 48W | 258 |
| EL TORU MCAS | 33 40N | 117 44W | 380 |
| ENGLAND AFB | 31 19N | 92 33W | 89 |
| ENIWETOK ATOLL | 11 21N | 162 15E | 21 |
| FURT BENNING | 32 32N | 84 54W | 252 |
| FURT BLISS | 31 48N | 106 23W | 1205 |
| FORT BRAGG/POPE | 35 8N | 78 56W | 242 |
| FORT CAMPBELL | 36 40N | 87 30W | 559 |

| THE BOEING VERTOL COMPANY | | | U210-10600-1 |
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| THE BULLING VERTOR CONFANT | LATITUDE | LONGITUDE | ELEVATIUN |
| | DEG MIN | | |
| | | | |
| FORT CARSON | 38 41N | 104 46W | |
| FORT EUSTIS | • | 76 37W | 10 |
| FORT HOOD | 31 8N | 97 34W | 33 |
| FURT HUACHUCA | 31 35N | | 1422 |
| FORT KNOX | 37 54N | 85 58W | 764 |
| FORT LEAVENWORTH | 39 22N | 94 55W | 786 |
| FORT LEWIS | 47 5N | 122 35W | 301 |
| FUKT ORD | 36 41N | 121 46W | 134 |
| FORT RUCKER | 31 14N | 85 26W | 325 |
| FORT SILL | 34 39N | 98 24W | 119 |
| FORT WOLTERS | 32 47N | 98 4W | 964 |
| FRUBISHER | 63 45N | 68 38W | 96 |
| GEN MITCHELL | 42 47N | 87 54W | 698 |
| HANOI | 21 1N | 105 51E | 53 |
| HICKAM AFB | 21 20N | 157 55W | 14 |
| HILL AFB | 41 7N | 111 58W | 4788 |
| HOMESTEAD AFB | 25 28N | 80 24W | 17 |
| HONG KONG | 22 20N | 114 12E | 13 |
| HUNTER AAF | 32 1N | 81 8W | 70 |
| HUNTSVILLE | 34 39N | 86 47W | 629 |
| IWAKUNI | 34 9N | 132 146 | 10 |
| INU JIMA AB | 24 47N | 141 19E | 350 |
| JACKSONVILLE | 30 25N | 81 39W | 24 |
| JUHNSTON ISLAND | | 169 31w | 7 |
| JUNEAU | 58 27N | 134 34W | 1676 |
| KADENA AB | 26 21N | 127 46E | 142 |
| KAKACHI | 24 54N | 67 9E | |
| KEY WEST | 24 33N | 81 48W | 9 |
| KIMPO AB | 37 33N | 126 48E | 60 |
| KODIAK | 57 45N | 152 31W | 77 |
| KWAJALEIN NS | 8 44N | 167 43E | 24 |
| LAHORE | 31 27N | 74 26E | 702 |
| LAKSON AFB | 47 12N | 119 19W | 1186 |
| LITTLE ROCK | 34 55N | 92 9W | 311 |
| LOCKBOURNE | 39 39N | 82 56W | 744 |
| LUKING AFB | 46 57N | 67 53W | 746 |
| LUKE AFB | 33 30N | 112 22W | 1093 |
| MANDALAY | 21 56N | 96 5E | 2541 |
| MAURITIUS ISLAND | 20 265 | 57 41E | 165 |
| MCGUIRE AFB | 40 2N | 74 36W | 127 |
| MEDAN | 3 34N | 98 40E | 102 |
| MELBOURNE | 37 525 | 144 45E | 46 |
| MEMPHIS | 35 3N | 89 59W | 284 |
| MEXICO CITY | 19 26N | 99 8W | 7382 |

114 27W

676

62 28N

YELLOWKNIFE

| THE BOEING VERTOL CUMPANY | LATITUDE DEG MIN | LUNGITUDE DEG MIN | D210-1 ELEVATION FT | 0600-1 |
|---------------------------|---------------------|----------------------|---------------------------|--------|
| ZAHEDAN | 29 27N | 60 54E | 4716 | |

| AHAHAN | ALAMEDA NAS EGUNE.I | ANDERSON AFR | ANDREWS AFR (CONT.) |
|-------------------|---------------------|---------------------|---------------------|
| ADEN 17 | FLLINGTON AFB 27 | CHITISF AR 27 | KEY WEST 33 |
| BAGHOAD 17 | ELL SWORTH AFR 22 | CLARK AFH 27 | LARSON AFR 33 |
| 7 MHAY 17 | FLMENDURF AFR 22 | CUOKTOWN 27 | LITTLE ROCK 33 |
| DHAHRAN 17 | EL TORO MCAS 22 | DARHIN 28 | LUCKHOURNE 33 |
| KARACHI 17 | ENGLAND AFH 22 | DAVA7 28 | LORING AF6 33 |
| LAII-1RF 17 | FIRT BENNING 22 | ENTWETOK ATOLL 28 | LUKE AFB 34 |
| NEW DELMI 17 | FORT HL (SS 22 | HONG KONG 28 | MEMPHIS 34 |
| TEHRAN 17 | FORT CAMPBELL 22 | [HAKUN] 28 | MEXICO CITY 34 |
| ZAHFDAN 17 | FURT CARSON 22 | JWD JEMA AB 28 | MINOT AFB 34 |
| | FORT HUND 23 | KADENA AB 28 | MINN-ST PAUL 34 |
| ADAK NS | FORT HUNCHUCA 23 | KIMPO A4 28 | NELLIS AFR 34 |
| ATTU 18 | FURT KNOX 23 | KWAJALEIN NS 28 | NEW IRLEANS 34 |
| CHITOSE AR 18 | FORT LEAVENWOUTH 23 | MISAWA AH 29 | |
| DUTCH HARHUR 1H | FURT LEWIS 21 | | NIAGARA FALLS 34 |
| EIFLSON AFH 18 | | PORT MORFSHY 29 | PATRICK AFR 34 |
| ELMENDORF AFB 18 | FURT RUCKER 23 | PUSAN FAST 29 | PITTSBURGH 35 |
| | FORT SILL 23 | SHANGHAI 29 | REGINA 35 |
| JUNFAU 18 | FIRT WOLTERS 23 | TAIPFI 29 | SCOTT AFH 35 |
| KODIAK 18 | GEN MITCHELL 23 | TOKYO 29 | SELFRIDGE AFB 35 |
| MIOWAY ISLAND 18 | HILL AFR 24 | VAN(MI 29 | SHAW AFB 35 |
| MISAWA AB 19 | HUNTSVILLT 24 | WAKE ISLAND 29 | WESTOVER AFR 35 |
| PRUDHOS 3AY 19 | JUNFAU 24 | The second second | WURTSMITH 35 |
| SHEMYA 19 | KODIAK 24 | ANDREWS AFH | YAKIMA 35 |
| **** | LAKSON AFH 24 | MILSE 29 | YELLOWKNIFE 35 |
| ADELATOR | LITTLE ROCK 24 | CANNON AFR 30 | |
| H41244NE 10 | 1 DCK 10084F 54 | CARSHELL AFR 30 | ATTU |
| CUNKTOWN 19 | LUKE AFB 24 | CHERRY PT MCAS 33 | ADAK NS 18 |
| DARWIN 19 | 4FMPH15 24 | CHICAG) 30 | CHITOSE AB 36 |
| MEL 4-JURNE 19 | MEXICO CITY 25 | CHU4CHILL 30 | DUTCH HARBUR 36 |
| NAU4EA 19 | MINUT AFA 25 | CORPUS CHP1571 3C | ELELSUN AFB 36 |
| PERTH 19 | MINN-ST PAUL 25 | EDMONTON 30 | FLMENDORF AFB 36 |
| PORT MORESRY 19 | NELLIS AFR 25 | | JUNEAU 16 |
| VANIMO 20 | NEW TRLTANS 25 | FLLINGTON AFR 30 | KODIAK 36 |
| WELL.INGTON 20 | NIAGARA FALLS 25 | FELSHORTH ACH 31 | MIDWAY ISLAND 36 |
| | UXNARD AFR 25 | EL 1080 MCAS 31 | MISAWA AR 36 |
| ADEN | PITTSBUP 14 25 | ENGLAND AFR 31 | PRUDHOE BAY 36 |
| ABADAN 17 | REGINA 25 | FORT BENNING 31 | TOKYO 37 |
| HAGHDAD 20 | SCOTT AFB 26 | FORT 96155 51 | |
| 10 2C | SELFRIOUR AF3 26 | FORT BRAGGIPAPE 31 | BAGHDAD |
| DH4HRAN 2C | WURTSMITH 26 | FORT CAMPRELL 31 | AHADAN 17 |
| KAPACHI 20 | Y4KIMA 26 | FURT CARSON 31 | ADEN 20 |
| LAHORE 20 | YELLOWKNIFE 26 | FORT HOM'S 31 | 9048AV 37 |
| TEHRAN 20 | | FORT HUACHUCA 32 | DHAHRAN 37 |
| 1AHEDAN 20 | ALERT | FORT KYOX 32 | KARACHI 37 |
| | CHURCHILL 26 | FORT LEAVENWORTH 32 | LAHORE 37 |
| ALAMEDA NAS | F JMONTON 26 | FORT AJCKER 32 | NEW DELHI 37 |
| 3015E 21 | E1ELSON AF3 26 | FORT SILL 32 | TEHRAN 37 |
| CANNON AF3 21 | FLMENDORF AFI 26 | FORT WILLTERS 32 | ZAHEDAN 37 |
| CAHSWELL AFH 21 | FROHISHER 27 | FRURT SHER 32 | 21 |
| CHICAGO 21 | JUNEAU 21 | GEN "117CH"LL 32 | HANGKOK |
| CHURCHILL 21 | KINDIAK 27 | HILL AF8 32 | HOMBAY 37. |
| CORPUS CHRISTI 21 | PRUDHITE BAY 27 | HUMESTEAD AFR 33 | CALCUTTA 38 |
| EDMUNTON 21 | THULF 27 | HUNTER AAF 33 | CLARK AFH 38 |
| EGLIN AFR 21 | VELLO 4KNIFF 27 | HUNTSVILLE 33 | COLIMBO 38 |
| FIELSON AFR 21 | CERTIFICATION 5 | JACKSONVILLE 33 | DA NANG |

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| BANGKOK (CONT.) | BOISE (CONT.) | BRISBANE (CONT.) | CANNON AFB (CONT.) |
|------------------------------|----------------------------|--|-----------------------------------|
| DAVA(1 30 | HUNTER 44F 44 | MELBOURNF 49 | FORT LEAVENWORTH 54 |
| DJAKARTA 38 | HUNTSVILLE 44 | NOUMFA 49 | FORT LEWIS 54 |
| HANO1 38 | JACKSONVILLE 44 | PERTH 49 | FORT ORD 54 |
| HONG KONG 38 | JUNEAU 44 | PORT MORESRY 49 | FORT RUCKER 54 |
| KADENA AH 38 | KODIAK 44 | SUVA, FIJI 49 | FORT SILL 54 |
| KARACHI 39 | LARSON AFB 44 | VANIMO 49 | FORT WOLTERS 54 |
| K[4P() A8 39 | LITTLE ROCK 44 | WELLINGTON 49 | GEN MITCHELL 54 |
| LAHORE 39 | LOCKBOURNE 44 | CA1 CUTT 4 | HILL AFB 54 |
| MANDALAY 39 | LUKE AFR 44 | CALCUTTA | HOMESTEAD AFB 54 HUNTER AAF 55 |
| MEDAN 39 | MCGUIRE AFB 45 | BANGKOK 38 ROMBAY 47 | HUNTSVILLE 55 |
| NEW DELHI 39 | MEXICO CLTY 45 | CLARK AFR 49 | JACKSONVILLE 55 |
| PENANG39 | MINOT AFR 45 | COLOMBO 49 | JUNEAU 55 |
| PUSAN EAST 39 | MINN-ST PAUL 45 | DA NANG 50 | KEY WEST 55 |
| | NELL IS AFB 45 | | LARSON AFB 55 |
| SATGON 40 SHANGHAI 40 | NEW CUMBERLAND 45 | MANDE 50 HONG KONG 50 | LITTLE ROCK 55 |
| SINGAPORE 40 | NEW ORLEANS 45 | KARACHI 50 | LOCKBOURNE 55 |
| TAIPEI 40 | NIAGARA FALLS 45 | LAHORE 50 | LORING AFR 55 |
| 141721 | 0XNARD AFR 46 | MANDALAY 50 | LUKE AFB 56 |
| BOLSE | PATRICK AFB 46 | MEDAN 50 | MCGUIRE AFB 56 |
| ALAMEDA NAS 21 | PITTSHURGH 46 | NEW DELHI 50 | MEMPHIS 56 |
| ANDREWS AFH 29 | PRUDHOE BAY 46 | PEIPING 50 | MEXICO CITY 56 |
| CANNIN AFB 4C | REGINA 46 | PENANG 51 | MINOT AFB 56 |
| CARSHELL AFR 4C | SCOTT AFR 46 | \$AIGUN 51 | MINN-ST PAUL 56 |
| CHERRY PT MCAS 40 | SELFRIDGE AFR 46 | SHANGHAI 51 | NELLIS AFB 56 |
| CHICAGO 40 | SHAW AFH 46 | SINGAPORE 51 | NEW CUMBERLAND 56 |
| CHURCHILL 40 | WESTOVER AFR 46 | TAIPEI 51 | NEW ORLEANS 56 |
| CORPUS CHRISTI 41 | WURTSMITH 47 | ZAHEDAN 51 | NIAGARA FALLS 57 |
| DUVER AFR 41 | YAKIMA 47 | | OXNARD AFR 57 |
| EDMONTON 41 | YELLOWKNIFE 47 | CANNUN AFB | PATRICK AFB 57 |
| FGLIN AFR 41 | | ALAMEDA NAS 21 | PITTSBURGH 57 |
| EIFLSON AFB 41 | BOHBAY | ANDREWS AFH 30 | REGINA 57 |
| FLLINGTON AFB 41 | AHADAN 17 | BOISE 40 | SCOTT AFB 57 |
| ELLSWORTH AFB 41 | ADEN 20 | CARSAELL AFB 51 | SELFRIDGE AFB 57 |
| ELMENDORF AFB 41 | AAGHUA) 37 | CHERRY PT MCAS 51 | SHAW AFB 57 |
| EL TORO MCAS 41 | BANGKUK 37 | CHICAGO 51 | WESTOVER AF8 57 |
| ENGLAND AFR 42 | CALCUTTA 47 | CHURCHILL 52 | WURTSMITH 58 |
| FORT BENNING 42 | COLO480 47 | CURPUS CHRISTI 52 | YAKIMA 58 |
| FORT BLISS 42 | DHAHRAN 47 | DOVER 4FB 52 | YELLOWKNIFE 58 |
| FORT BRAGG/POPE 42 | DIEGO GARCIA 47 | EDMONTON 52 | |
| FORT CAMPBELL 42 | HANOI 47 | EGLIN AFB 52 | CARSWELL AFB |
| FORT CARSON 42 | KAKACHE 47 | ELLINGTON AFB 52 | ALAMEDA NAS 21 |
| FORT EUSTIS 42 | LAHORE 48 | ELLSWIRTH AFR 52 | ANDREWS AFB 30 |
| FORT HOND 42 | MANDALAY 48 | EL TORO MCAS 52 | BOISE 40 |
| FORT HUAGHUCA 42 | MEDAN 48 | ENGLAND AFB 52 | CANNON AF8 51 |
| FORT KNOX 43 | NEW DELHI 48 | FORT RENNING 53 | CHERRY PT NCAS 58 |
| FORT LEAVENWORTH 43 | PENANG 48 | FORT BLISS 53 | CHICAGO 58 |
| FORT LEWIS 43 | TEHRAN 48 | FORT BRAGG/POPE 53 FORT CAMPBELL 53 | CHURCHILL 58 CORPUS CHRISTI 58 |
| FORT (18043 | ZAHEDAN 48 | FURT CARSON 53 | DOVER AFR 58 |
| FORT RUCKER 43 | HRISHANE | FORT EUSTIS 53 | EDMONTON 58 |
| FORT SILL 43 FORT WOLTERS 43 | | FORT HOND 53 | EGL IN AF8 59 |
| GEN 41TCHELL 43 | ADELAIDE 19 COOKTOWN 48 | FORT HUACHUCA 53 | ELLINGTON AFB 59 |
| HILL AFH 43 | DARMIN 48 | FORT KNOX 53 | ELLSWORTH AFB 59 |
| HIEF MAILS A A A A A A A A | O40810 | - Uni ninin = 23 | PPP 64444111 MLB 3 34 |

| CARSWELL AFB (CONT.) | CHERRY PT MCAS (CONT.) | CHICAGO (CONT.) | CHICAGO (CONT.) |
|---------------------------------|------------------------|---------------------|---------------------|
| EL TORO MCAS 59 | CORPUS CHRISTI 64 | CARSWELL AFB 58 | SHAW AFB 75 |
| ENGLAND AFB 59 | DUVER AFB 64 | CHERRY PT MCAS 64 | WESTOVER AFB 75 |
| FORT BENNING 59 | EDMONTON 64 | CHURCHILL 70 | WURTSMITH 76 |
| FORT BLISS 59 | EGLIN AFB 65 | CORPUS CHRISTI 70 | YAK IMA 76 |
| | | | VELLOWKNIFE 76 |
| FORT BRAGG/POPE 59 | ELLINGTON AFB 65 | DOVER AFB 70 | ACTEONWHILE IB |
| FORT CAMPBELL 59 | ELLSWORTH AFR 65 | EDMONTON 70 | C.41 T.DEF 4.9 |
| FORT CARSON 60 | ENGLAND AFH 65 | EGLIN AFH 70 | CHITOSE AB |
| FORT EUSTIS 6C | FORT BENNING 65 | ELLINGTON AFR 7G | ADAK NS 18 |
| FORT HUACHUCA 60 | FORT BLISS 65 | ELLSWORTH AFH 70 | ANDERSON AFB 27 |
| FORT KNOX 60 | FORT CAMPBELL 65 | EL TORO MCAS 70 | ATTU 36 |
| FORT LEAVENWORTH 6G | FORT CARSON 65 | ENGLAND AFB 70 | CLARK AFB 76 |
| FURT LEWIS 60 | FORT EUSTIS 65 | FORT RENNING 71 | HONG KONG 76 |
| FORT DRU 60 | FORT HOOD 66 | FORT BLISS 71 | IWAKUNI 76 |
| FURT RUCKER 60 | FORT HUACHUCA 66 | FORT BRAGG/POPE 71 | INO JEMA AB 76 |
| GEN MITCHELL 6G | FORT KNOX 66 | FORT CAMPBELL 71 | KADENA AB 76 |
| HILL AFB 61 | FORT LEAVENWORTH 66 | FORT CARSON 71 | KIMPO AB 76 |
| HUMESTEAD AFR 61 | FORT RUCKER 66 | FURT EUSTIS 71 | PEIPING 77 |
| HUNTER AAF 61 | FORT SILL 66 | FORT HOOD 71 | PUSAN EAST 77 |
| HUNTSVILLE 61 | FURT WOLTERS 66 | FORT HUACHUCA 71 | SHANGHAI 77 |
| JACKSONVILLE 61 | FROBISHER 66 | FORT KNOX 71 | SHENYA 77 |
| KEY WFST 61 | GEN MITCHELL 66 | FORT LEAVENWORTH 72 | TAIPEL 77 |
| LARSON AFB 61 | HILL AFB 67 | FORT LEWIS 72 | TOKYO 77 |
| LITTLE ROCK 61 | HOMESTEAD AFB 67 | FORT ORD 72 | MAKE ISLAND 77 |
| LUCKBOURNE 61 | HUNTER AAF 67 | FORT PUCKER 72 | |
| LORING AFB 62 | HUNTSVILLE 67 | FURT STLL 72 | CHURCHILL |
| LUKE AFB 62 | JACKSUNVILLE 67 | FORT WOLTERS 72 | ALAMEDA NAS 21 |
| MCGUIRE AFR 62 | KEY WEST 67 | FROBISHER 72 | ALERT 26 |
| MEMPHIS 62 | LITTLE RUCK 67 | HILL AFR 72 | ANDREWS AFB 3C |
| MEXICO CITY 62 | LOCKBOURNE 67 | HOMESTEAD AFB 72 | BOISE 40 |
| | LORING AFR 67 | HUNTER AAF 73 | CANNON AFB 52 |
| MINOT AFH 62 MINN-ST PAUL 62 | LUKE AFR 68 | HUNTSVILLE 73 | CARSHELL AFR 58 |
| | | JACKSUNVILLE 73 | |
| NELLIS AFR 62 | MCGUIRE AFR 68 | | CHERRY PT MCAS 64 |
| NEW CUMBERLAND 62 | MEMPHIS 68 | JUNEAU 73 | CHICAGO 70 |
| NEW ORLEANS 63 | MEXICO CITY 68 | KEY WEST 73 | CORPUS CHRISTI 77 |
| NIAGARA FALLS 63 | MINOT AFR 68 | LARSON AFR 73 | DOVER AFB 77 |
| OXNARD AFR 63 | MINN-ST PAUL 68 | LITTLE ROCK 73 | EDMONTON 78 |
| PATRICK AFR 63 | NFLLIS AF4 68 | LOCKBURNE 73 | EGLIN AFB 78 |
| PITTSBURGH 63 | NEW CUMHERLAND 68 | LORING AF8 73 | EIELSON AFR 78 |
| RFGINA 63 | NEW ORLFANS 68 | LUKE AFR 74 | ELLINGTON AFB 78 |
| SCOTT AFR 63 | NIAGARA FALLS 69 | MCGUIRE AFH 74 | ELLSWORTH AFR 78 |
| SELFRIDGE AFB 63 | PATRICK AFH 69 | MEMPHIS 74 | ELMENDORF AFB 78 |
| SHAW AFB 63 | P1 TTSBURGH 69 | MEXICO CITY 74 | EL TORO MCAS 78 |
| WESTOVER AFR 64 | REGINA 69 | MINOT AFB 74 | ENGLAND AFB 78 |
| WURTSMITH 64 | SCOTT AFB 69 | MINN-ST PAUL 74 | FORT BENNING 78 |
| YAKIMA 64 | SELFRIDGE AFR 69 | NELLIS AFR 74 | FORT BLISS 79 |
| YELLOWKNIFE 64 | SHAW AFB 69 | NEW CUMBERLAND 74 | FORT BRAGG/POPE 79 |
| 4 | WESTOVER AFR 69 | NEW ORLEANS 74 | FORT CAMPBELL 79 |
| CHERRY PT MCAS | WURTSMITH 69 | NIAGARA FALLS 75 | FORT CARSON 79 |
| ANDREWS AFR 3C | | OXNARO AFH 75 | FORT EUSTIS 79 |
| BOISE 40 | CHICAGO | PATRICK AFR 75 | FORT HODD 79 |
| CANNON AFR 51 | ALAMFDA NAS 21 | PITTSHURGH 75 | FORT HUACHUCA 79 |
| CARSWELL AFB 58 | ANDREWS AFR 30 | REGINA 75 | FORT KNOX 79 |
| CHICAGO 64 | MOISF 40 | SCOTT AFH 75 | FORT LEAVENWORTH 79 |
| CHURCHILL 64 | CANNON AFR 51 | SELFRINGE AFB 75 | FORT LEWIS 8C |
| | | | |

| CHARCHILL LEGAR 1 | C1 48# 458 400MT 1 | CORDING CURIORS 40000 1 | |
|---------------------|--------------------|-------------------------|-----------------|
| CHURCHILL (CONT.) | CLARK AFB (CONT.) | CORPUS CHRIST! (CONT.) | DA NANG |
| FORT ORD | MANDALAY 65 | CHURCHILL 77 | BANGKOK 36 |
| FORT RUCKER &G | MEDAN | DOVER AF8 89 | CALCUTTA 50 |
| FORT SILL 80 | MI SAWA AB 85 | EDMONTON 89 | CLARK AFB 84 |
| FURT MOLTERS 40 | PEIPING | | |
| FROBISHER BC | PENANG 85 | ELLINGTON AFB 89 | DAVAO 95 |
| GEN MITCHELL BC | PUSAN EAST 86 | ELLSWORTH AFB 89 | DJAKARTA |
| HILL AFR 80 | SAIGON | EL TORO MCAS 89 | HANO! 95 |
| HUNTER AAF 80 | SHANGHAI 86 | ENGLAND AFB 90 | HONG KONG |
| HUNTSVILLE BL | SINGAPORE 86 | FORT BENNING 90 | [MAKUNI 95 |
| . JACKSONVILLE 01 | TAIPEI | FORT BLISS 00 | INO JIMA AB |
| JUNEAU 81 | TOKYO | FORT BRAGG/POPE 90 | KADENA AB 95 |
| KODIAK 61 | VAN ING 86 | FORT CAMPBELL 90 | KIMPO A8 |
| LARSON AFB 81 | | FORT CARSON 90 | MANDALAY |
| LITTLE ROCK | COLOMBO | FORT EUSTIS 90 | MEDAN 96 |
| LOCKBOURNE 81 | BANGKOK 38 | FORT HOOD 90 | NEW DELHI 96 |
| LORING AFB 81 | BOMBAY 67 | FORT HUACHUCA 90 | PEIPING |
| LUKF AFB 81 | CALCUTTA 49 | FORT KNOX 91 | PENANG |
| MCGUIRE AFB 82 | DA NANG 66 | FORT LEAVENWORTH 91 | PUSAN EAST |
| MEMPHIS 82 | DIEGO GARCIA 86 | FORT LEWIS 91 | SAIGON 96 |
| MINOT AFB 82 | DJAKARTA 67 | FORT URD 91 | SHANGHAI 96 |
| MINN-ST PAUL 82 | HANDI 87 | FORT RUCKER 91 | SINGAPORE 97 |
| NELLIS AFB 82 | KARACHI 87 | FORT SILL 91 | TAIPEI 47 |
| NFW CUMBERLAND 82 | LAHORE 87 | FORT WOLTERS 91 | 141761 |
| NEW ORLEANS 82 | MANDALAY 87 | GEN MITCHELL 91 | DARWEN |
| NIAGARA FALLS 82 | MEDAN 87 | HILL AF8 91 | |
| DXNARD AFB 82 | | | ADELAIDE 19 |
| PATRICK AFR 83 | NEW DELHI 87 | HOMESTFAD AFB 92 | ANDERSON AF8 28 |
| PITTSBURGH 83 | PENANG 87 | HUNTER AAF 92 | BRISBANE |
| PRUDHOE BAY 83 | \$AIGON 87 | HUNTSVILLE 92 | CLARK AFS 84 |
| REGINA | SINGAPORE 88 | JACKSONVILLE 92 | COOKTOWN |
| | ZAHEDAN 88 | KEY WEST 92 | DAVAO 97 |
| SCOTT AFB 63 | COOKTOWN | LARSON AFB 92 | DJAKARTA 97 |
| SELFRIDGE AFB 63 | COOKTOWN | LITTLE ROCK 92 | MELBOURNE 97 |
| SHAW AFR 63 | ADELAIDF 19 | LOCKBOURNE 92 | PERTH 97 |
| THULE 83 | ANDERSON AFB 27 | LORING AFB 92 | PORT NORESBY |
| WESTOVER AFB 83 | BRISBANE 48 | LUKE AFR 93 | SINGAPORE 97 |
| WURTSMITH 84 | DARWIN 88 | MCGUIRE AFB 93 | VANIMO |
| YAKIMA | DAVAD 66 | MEMPHIS 93 | |
| YELLOWKNIFE 84 | ENIMETOK ATOLL 88 | MEXICO CITY 93 | DAVAO |
| C1 40 400 | KWAJALEIN NS 88 | MINOT AFR 93 | ANDERSON AFB 28 |
| CLARK AFB | MELBOURNE | MINN-ST PAUL 93 | BANGKOK + |
| ANDERSUN AFR 27 | NOUMEA 88 | NELLIS AFB 93 | CLARK AFB 84 |
| BANGKOK 38 | PERTH 88 | NEW CUMBERLAND 93 | COOKTOWN 88 |
| CALCUTTA 49 | PORT MORESBY 89 | NEW ORLEANS 93 | DA NANG 95 |
| CHITOSE AR 76 | SUVA, FIJI 89 | NIAGARA FALLS 94 | DARWIN 97 |
| DA NANG 84 | VANIMO 89 | OXNARD AF8 94 | DJAKARTA 98 |
| . DARWIN 84 | | PATRICK AFB 94 | HANOI 88 |
| DAVAO 84 | CORPUS CHRISTI | PITTS BURGH 94 | HONG KONG 98 |
| DJAKARTA 84 | ALAMEDA NAS 21 | REGINA 94 | IMAKUNI |
| HANDI 84 | ANDREWS AFB 30 | SCOTT AFB 94 | INO JIMA AB 98 |
| HONG KONG 84 | BOISE 41 | SELFREDGE AFB 94 | KADENA AB 08 |
| IWAKUNI | CANNON AFB 52 | SHAW AFR 94 | KIMPO A8 98 |
| ' IWO JINA AB 85 | CARSMELL AFB 58 | MESTOVER AFB 94 | MANDALAY |
| KADENA AB | CHERRY PT MCAS 64 | WURTSMITH 95 | MEDAN 96 |
| KIMPO A8 65 | CHICAGO 70 | | PENANG |

| SAIGOM - 99 FLLSWIPM AFR - 102 LASSIM AFB - 108 REGURE AFB - 112 SINGAPINET - 99 FORT REMINGS - 102 PHOWNE BAY - 108 REGURE AFB - 112 TOXIO - 99 FORT ARENINGS - 102 SHEWAR 108 RINDT AFB - 112 TOXIO - 99 FORT ARENINGS - 102 SHEWAR 108 RINDT AFB - 112 TOXIO - 99 FORT ARENINGS - 102 SHEWAR 108 RINDT AFB - 112 TOXIO - 99 FORT ARENINGS - 102 SHEWAR 108 RINDT AFB - 112 VANIHOD - 99 FORT ARENINGS - 102 YELLOWKIPF - 108 RILLS AFF 112 ADAM - 17 FORT HOUDD - 101 DIAMRAN | PORT KORESRY | DOVER AFR (GONT.) FGLIN AFR 102 | DUTCH HARROR (CONT.) | EDMONTON (CONT.) |
|--|---------------|------------------------------------|---|-------------------|
| SANGOMAI - 99 FLISHMIN AFR - 1C2 | PUSAN F4ST 99 | ELLINGTUN AFR LOS | KODIAK 167 | LORING AFO 112 |
| SHAMGHAI | SAIGON 49 | FLLSWORTH AFR 1C2 | LARSON AFB 1G7 | |
| SYNGAPPRE | SHANGHAI 99 | ENGLAND AFA 1C2 | | |
| TAIPEI - 90 FORT RARGOPPOP - 1C2 VAKIMA 100 MINN-ST PAUL - 112 VAVINO - 90 FORT CARSON - 1C3 NEW CUMBER, AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRLE AMD - 113 NEW GIRL AMD - 113 NEW GIRLE AMD - 113 NEW GIRL AMD - 113 NEW GIRL AMD - 114 NEW GIRLE AMD - 113 NEW GIRL AMD - 114 NEW GIRLE AMD - 115 NEW GIRL | | | | |
| TOKYO 96 FORT MAGG/POPE - 1C2 VALUMA 108 MINW-SI PAUL 112 VALUMAIFE - 108 MILES APB 112 VALUMAIFE - 108 MILES APB 112 FORT MODO 103 DOMONTON NEW CUMBER, AMD 113 ADDAW 17 FORT MAGGUCA 103 ALAMETA WAS - 21 MILAGARA FALLS 113 ADDAW 2C FORT XMDA 103 ALAMETA WAS - 21 MILAGARA FALLS 113 ADDAW 2C FORT XMDA 103 ALAMETA WAS - 21 MILAGARA FALLS 113 ADDAW 103 ALAMETA WAS - 21 MILAGARA FALLS 113 ADDAW 104 ALAMDE 105 ALAMDE 107 ALAMDE | | | | |
| VALISOR | | | | |
| DHAMRAN FORT HODD 103 EDMONTON | | | | |
| DAMARAN | | | 100000000000000000000000000000000000000 | |
| ABDAN - 17 FORT MUACHUCA - 1C3 ALAWEIN WAS - 21 MIADAMA FALLS - 113 ADDEN - 2C FORT KNOK - 1C3 ANDREWS AFA - 30 PITTSBURGH 113 BOMRAY - 47 FORT RUCKER - 1C3 ANDREWS AFA - 30 PITTSBURGH 113 RARACHI - 10C FORT SILL - 1C3 CANON AFB - 52 REGINA 113 NFW DELMI - 10C FORT SILL - 1C3 CANON AFB - 52 REGINA 113 NFW DELMI - 10C FRIRISHER - 103 CHERRY PT MAS - 64 SELFRIDGE AFB - 113 NFW DELMI - 10C FRIRISHER - 103 CHERRY PT MAS - 64 SELFRIDGE AFB - 113 NFW DELMI - 10C FRIRISHER - 103 CHERRY PT MAS - 64 SELFRIDGE AFB - 113 TEHRAM 10C GFM MITCHELL - 104 CHEGGD - 70 SHAW AFB - 114 ZAMEDAN - 10D HILL AFH - 104 CHEGGD - 70 SHAW AFB - 114 DIEGEI GARCIA HUNTER AFF - 104 DIVER AFB - 102 WINTSWITH 114 CILIMAY 47 HUNTSVILLE 1C4 DIVER AFB - 102 WINTSWITH 114 CILIMAY 10C KEY WEST 104 FILESION AFB - 108 MAIRITTUS ISLAND - 10C LARSON AFB 10C FILINGTON AFB - 108 MEDAN 10C LITTLE ROCK - 1C4 FILINGTON AFB - 108 SINGAPPOR 101 LICKNOWNHE 105 FIRESWITH AFB - 108 SINGAPPOR 101 LICKNOWNHE 105 FIRESWITH AFB - 108 ARAGKOK - 38 MERICA - 105 FIRESWITH AFB - 109 CANNON AFB - 52 CLARK AFB - 84 KINCH GEN AFB - 105 FORT HILLS AFB - 107 DAWLIN | DHAHRAN | | FOMONTON | |
| ADEN———————————————————————————————————— | | | | |
| BACHDAD - | | | | |
| BORRAY | | | AMOREUS ASA 30 | |
| RAMACH 100 | | | | |
| LAMORE | | | | |
| NEW DELHI 105 | | | | |
| TEMPAN | | | | |
| THILL AFM | | | | |
| DIEGU GARCIA | | | | |
| DIEGG GARCIA HUNTER ARF | ZAMEDAN 100 | | | |
| BIMBAY | | | | WESTOVER AFR LI4 |
| COLUMNO | | | DOVER AFR 102 | WURTSMITH 114 |
| KARACMI | | | | AVENU 114 |
| MAINTITUS SLAND1.07 | | | FGLIN AFH 108 | YELLOWKNIFE 114 |
| MEDAN | | | FIELSON AFH LOB | |
| PENANG——————————————————————————————————— | | LARSON AFB 104 | FLLINGTON AFR 108 | EGLIN AFB |
| SINGAPORE | | | ELLSWORTH AFR 108 | ALAMEDA NAS 21 |
| DJAKARTA | | LUCKBOURNE 105 | ELMENDORF AFR 109 | ANDREWS AFR 30 |
| DJAKARTA | SINGAPORE 101 | | EL TURO MGAS 109 | BOISE 41 |
| RANGKOK 38 4EXICU CITY 1C5 CLARK AFB | | | ENGLAND AFR 109 | CANNON AFR 52 |
| CLARK AFR | | MEMPHLS 105 | FURT RENNING 109 | CARSHELL AFB 59 |
| COLOMBO | | 4EXICO CITY 105 | FORT ALISS 109 | CHERRY PT MCAS 65 |
| DA NANG 95 DARWIN 97 NEW ORLEANS | | | FORT BRAGG/POPE 109 | CH1CAGO 70 |
| DARMIN 97 NEW ORLEANS | COLOMBO 87 | MINN-ST PAUL 105 | FORT CAMPBELL 109 | CHURCHILL 78 |
| DAVAO | DA NANG 95 | | FORT CARSIN 109 | CORPUS CHRISTI 69 |
| MANOT | DARWIN 97 | NEW TRLEAMS LC5 | FURT EUSTIS 109 | |
| MANOT | DAVAO 98 | NIAGARA FALLS 106 | FORT HOOD 110 | EDMONTON 108 |
| MANDALAY | HANDI 101 | PATRICK AFR 1C6 | FORT HUACHUCA 110 | |
| MANDALAY | HUNG KONG 1CL | PITTSBURGH 106 | FIJRT KNIJX 110 | ELLSWORTH AFB 114 |
| MEDAN | | | FORT LEAVENWORTH110 | |
| PENANG | | SCUTT AFR 106 | FORT LEWIS | |
| PERTH | | | | |
| SAIGON | PERTH 101 | | | |
| SINGAPORF | | | | |
| VELLOHKNIFE 107 | SINGAPORE LCI | WIRTSMITH 106 | | |
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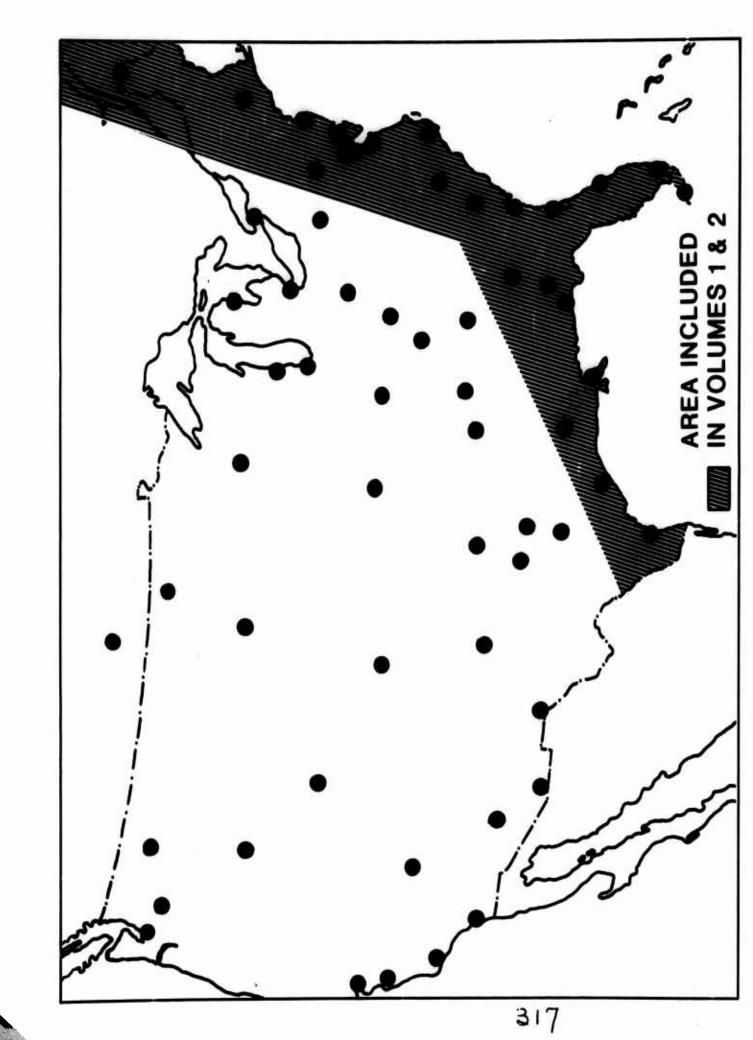
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